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CENTENNIAL OF
FLIGHT

1903-2003

Born of Dreams—
Inspired by Freedom

U.S. Centennial of Flight Commission

Final Report for The Centennial of Flight Commemoration

April 2004

CENTENNIAL OF
FLIGHT
1903-2003

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The President
The White House
Washington, DC 20500

Dear Mr. President:

In accordance with Section 10 of the Centennial of Flight Commemoration Act (P.L. 105-389, as amended by P.L. 106-68), I am pleased to present to you the fiscal year 2003 Annual Report of the U.S. Centennial of Flight Commission.

The report this year also serves as a final report for the Commission and provides an overview of the events, activities and programs that took place across the country and around the world as part of the *Centennial of Flight: Born of Dreams – Inspired by Freedom* commemoration. The celebration officially began with a kick off ceremony at the National Air and Space Museum on Dec. 17, 2002, and in the year that followed, major events took place in New York City; Dayton, Ohio; and Kill Devil Hills, N.C., among others. Your presence at key events in Ohio and North Carolina was truly the high point of the centennial year. The involvement of high-ranking government officials from the Department of Interior, Department of Transportation, U.S. Air Force, National Aeronautics and Space Administration and Federal Aviation Administration also contributed to the overall success of the commemoration.

The U.S. Centennial of Flight Commission is extremely proud of the caliber of the events and the large number of people who participated. The real impact of the commemoration, however, can be best measured by its educational reach. The Web site proved to be a valuable resource, totaling almost four million hits in the month of December alone. Numerous educational materials, including posters, brochures, lesson plans and classroom materials were produced and distributed, and the Commission was able to reach the next generation of inventors through the classroom, the media, the Web site and word of mouth.

As detailed in the report, we have accomplished much this year. The U.S. Centennial of Flight Commission members and the First Flight Centennial Federal Advisory Board members are proud of the results generated, and thank you for the opportunity to participate in a once in a lifetime celebration such as this. We believe the Wright brothers would have been proud.

Please do not hesitate to contact me, or the Commission staff, should you have any questions regarding this report or the activities of the Commission in general.

Sincerely,

J.R. Dailey
Chairman

Number

137 338 61

Enclosure

cc:
Members of Congress
Cabinet Secretaries
U.S. Centennial of Flight Commission Members
First Flight Centennial Federal Advisory Board Members

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Section 1 – Executive Summary

Throughout the last year, people across the country have celebrated the human desire for freedom, the power of dreams and the astonishing realities both can create. Eyes have been turned skyward as people of all ages have been fascinated by the wonder of flight.

The U.S. Centennial of Flight Commission was established in 1999 to encourage the broadest national and international participation in the celebration of 100 years of powered flight, while publicizing and encouraging programs, projects and events that would involve, educate and enrich the maximum number of people. The results have exceeded the wildest of expectations.

The U.S. Centennial of Flight Commission is proud of the events that have taken place, including: the Festival of Flight in Fayetteville, Space Day, Inventing Flight in Dayton, GE Presents Centennial of Flight at Rockefeller Center, EAA's Countdown to Kitty Hawk tour, the opening of "The Wright Brothers and the Invention of the Aerial Age" at the Smithsonian National Air and Space Museum, the National Air Tours, the American Institute of Aeronautics and Astronautics' "Evolution of Flight" campaign, Wolf Trap's Face of America, the opening of the Steven F. Udvar Hazy Center at Dulles International Airport, the First Flight Centennial Celebration in North Carolina and the countless others that have occurred across the country and around the globe.

These events, however, would not have been nearly as successful without the involvement of several organizations, including the National Aeronautics and Space Administration, the Federal Aviation Administration, the U.S. Air Force and Aviation Week & Space Technology's Next Century of Flight.

Most importantly, the U.S. Centennial of Flight Commission is proud of the educational legacy that has been created. The combined outreach efforts of the U.S. Centennial of Flight Commission and its Partners have reached millions of students. A new generation of inventors has been inspired, igniting a new level of enthusiasm for perseverance and determination in the quest for ingenuity.

The U.S. Centennial of Flight Commission would like to take this opportunity to thank everyone who has been a part of this important, once-in-a-lifetime commemoration. This year has been an amazing celebration of two bicycle mechanics from Dayton, Ohio, a century of achievements in aviation and aerospace, and a future of limitless possibilities.

Section 2 – Introduction by Dr. Tom Crouch

"Celebrating A Century of Wings"

When the citizens of the distant future look back on the 20th century, they will surely remember it as the time when human beings took to the sky. Images of flight already dominate our memory of the century past. In the fall of 1999, *USA Today* and the Newseum, an Arlington, Va., museum devoted to the history of news gathering, announced the results of a year-long poll in which 36,000 newspaper readers and a substantial number of journalists were asked to select the top 100 news stories of the century. The atomic bombing of Japan led the public list, followed by the attack on Pearl Harbor, the landing on the moon and the invention of the airplane. The journalists choose precisely the same top four stories, although they did reverse the moon landing and the attack on Pearl Harbor.

Was flight really so important in a century marked by war and revolution, hope and despair, and the rise and fall of nations, ideologies and empires? Certainly the results of the poll did not surprise the professional historians who were consulted by the newspaper. Douglas Brinkley of the University of New Orleans commented that Hiroshima was the "correct choice" for the top story. Arthur M. Schlesinger, Jr., countered that the moon walk is what people will remember in 500 years. My personal response was to call attention to the fact that the first three events could not have occurred without the fourth.

While caution and concern regarding the long term impact of technology were hallmarks of the late 20th century, most citizens of the aerospace age seem to have preserved their enthusiasm for flight and admiration for those who fly. I can be fairly regarded as something of an authority on public attitudes toward the history of flight. For three decades, exactly half my lifetime, I have been employed at the most significant shrine of the aerospace age.

In an average year, nine million people will walk through the doors of the National Air and Space Museum (NASM) -- 14 million in our best year. We welcome more visitors than the British Museum, the American Museum of Natural History, the Metropolitan or the Louvre. It is the most visited museum in the world. When NASM opened to the public on July 1, 1976, the staff was confident of success, but no one expected the enormous number of visitors who arrived that first summer, or the wave of media enthusiasm that washed over the building. President Gerald Ford commented that the museum was "our bicentennial birthday present to ourselves." In fact, those of us who planned the museum could take only limited credit for its success.

The quality of the NASM collection is a far more important factor. What other museum in the world, covering any subject, can offer such riches? Visitors to the NASM can see the world's first airplane; the world's first military airplane; the first airplane to fly around the world; the *Spirit of St. Louis*; the Lockheed Vega that Amelia Earhart flew across the Atlantic; Wiley Post's *Winnie Mae*; Howard Hughes' classic H-1 racing aircraft; the B-29 *Enola Gay*; the Bell X-1 that Capt. Charles Yeager, he of the right stuff, first flew faster than sound; the world's fastest airplane; the first airplane to fly around the world non-stop and un-refueled; the first balloon to circumnavigate the globe; the first helicopter to fly around the world; the world's oldest liquid propellant rocket; the spacecraft that carried the first American into orbit; and the Apollo 11 Command Module that brought the first human beings to walk on the surface of another world home again. And that is only the tip of our iceberg.

But the core of the museum's appeal runs deeper even than the opportunity to see the actual aircraft and spacecraft in which intrepid men and women wrote the history of the 20th century in the sky. However one assesses the immediate consequences of aviation, flight remains one of the most stunning and magnificent of human achievements. People flock to the NASM from around the world because this is a museum that makes them feel proud to be human, members of a species that has achieved these wonders.

Surely, a century of wings is something worth celebrating. That was the thought animating a diverse group of people across the nation who initiated planning for the Centennial of Flight a decade ago. From the outset, there was universal agreement that this would be a grassroots celebration, in which interested folks, from national aviation organizations to local communities, would craft their own unique events. The U.S. Centennial of Flight Commission and the First Flight Centennial Federal Advisory Board, which emerged in their final form from the Congress in 1999, were charged with coordinating all of those activities, and providing the visibility and cohesion required for a truly national commemoration.

It was an approach that succeeded. The centennial year was filled with a wide range of activities that gave millions of Americans an opportunity to participate in the celebration. The U.S. Centennial of Flight Commission's online calendar listed a total of 545 events from January 1, 2003 to December 17, 2003. There were art exhibitions, museum displays, lecture series, symposia, air shows, flight academies, professional conferences, kite contests, air races, fly ins, and celebrations and festivals of every stripe. They ranged from the purely local, like the special flight focus given to the 54th annual Coconino County Fair in Flagstaff, Ariz., to events like Rockefeller Center's salute to the Centennial, which attracted hundreds of thousands of visitors and national media attention.

The events that are the highpoints of every aviation year, such as the annual Experimental Aircraft Association (EAA) AirVenture Convention and the Dayton Air Show, were dedicated to the anniversary. Professional aerospace organizations, from the American Institute of Aeronautics and Astronautics (AIAA) to the Aerospace Medical Association and the International Symposium on Air Breathing Engines, built their annual meetings around the centennial theme. Non-aviation organizations, including the International Association of Science Teachers, added centennial sessions to their annual gatherings.

The Smithsonian National Air and Space Museum, Seattle's Museum of Flight and the Franklin Institute all opened major exhibitions on the Wright brothers and American aviation. Other museums and universities across the nation marked the centennial with film festivals, special lectures, and educational programs related to flight.

Federal agencies with a special interest in flight also stepped forward. The National Aeronautics and Space Administration (NASA) provided the U.S. Centennial of Flight Commission staff, office space and administrative support. The Federal Aviation Administration (FAA) administered the U.S. Centennial of Flight Commission funding and provided procurement support. Both NASA and the FAA focused their considerable education resources on the centennial, and supported many local events with personnel and traveling exhibits. The U.S. Air Force created a Centennial Office, which not only operated its own programs but also provided broad support to local and national events and projects.

Then there were the major special events. Fayetteville, N.C., invited the state and the nation to attend its Festival of Flight. Across the country, Americans were thrilled when 29 beautifully restored historic aircraft came to town with the National Air Tour. Both the AIAA and the EAA

organized full-scale national tours of replica Wright airplanes. No attendee will ever forget sharing an evening with the heroes of the air age at the National Aviation Hall of Fame event in the Dayton Convention Center, or gathering in the shadow of Kill Devil Hill to applaud 100 heroes of aviation named from the stage. President Bush helped to kick off the festivities in Dayton in July and braved the elements like everyone else who was at Wright Brothers National Memorial on December 17.

Education was a focal point for many Centennial Partners. Dayton's Inventing Flight produced a professionally-developed, multi-media curriculum package that used the story of the Wright brothers to spark the interest of 6th, 7th and 8th graders in science and math. Correlated to educational standards, the program was distributed to schools across the state and the nation. Ohio and the AIAA sponsored Class of 2003 programs that exposed students scheduled to graduate from high school in the centennial year to a variety of behind-the-scenes experiences and insight into aerospace careers. The AIAA also established a special program of graduate fellowships, while the EAA flew one million young Americans as part of its Young Eagles program. Web sites were the keystones of centennial education programs. The U.S. Centennial of Flight Commission's Web site, a rich source of accurate information and educational materials, attracted a total of 3.7 million hits in December 2003 alone.

Thanks in large measure to the efforts of Carter Ryley Thomas Public Relations and Marketing Counsel, the U.S. Centennial of Flight Commission's public relations planners, the centennial was an unqualified media success. Television, newspapers and magazines promoted centennial events and spread the message of the centennial – that Wilbur and Orville Wright had changed the world forever. Indeed, as the anniversary approached, it seemed that there was scarcely an evening when one cable channel or another was not offering centennial programming. The efforts of various groups and individuals across the nation to replicate the first flight captured the imagination of film makers and television viewers alike.

Many of us hoped that when the fireworks and the hoopla had faded, the centennial would leave a legacy. We were not disappointed. The National Park Service currently is conducting a detailed survey of historic sites that played a role in the history of flight. The resulting report will serve as the foundation for a generation of preservation efforts. The North Carolina First Flight Centennial Foundation funded improvements to the landscaping at Wright Brothers National Memorial; added a pilot facility at the nearby First Flight airstrip; and completely restored the great monument on Kill Devil Hill to its original appearance, complete with a rotating aircraft beacon. Finally, the Foundation funded a pair of temporary exhibition pavilions to supplement the visitor center.

Dayton Aviation Heritage National Park (DAHNP) is one of the most important legacies of the centennial era. The approaching anniversary helped to build broad support for a new park that would preserve and interpret the West Dayton neighborhood and other local sites where the Wrights had lived and worked. DAHNP includes the only original Wright bicycle shop that still stands on its original site and two new visitor centers. The effort involved upgrading related local historical attractions, including the home of Paul Laurence Dunbar, a high school classmate of Orville who became a famous African American poet; the 1905 Flyer, the world's first practical airplane; and Huffman Prairie, where the brothers completed the process of inventing the airplane in 1904 and 1905.

Could some things have gone better? Sure. But those disappointments are more than overshadowed by the unforgettable memories of a successful commemoration. December 17, 2003, provided a final set of memories. The weather and the wind did not cooperate. The

Wright Experience crew had flown its replica of the 1903 airplane a few days before, but could not coax it aloft on the anniversary day. That did not seem to dishearten the 40,000 people who braved the elements to be at the spot where history had been made a century before. I stood with Ranger Darrell Collins looking up at the thousands of people, clad in colorful rain ponchos and jackets, spread like a crazy quilt over the slope of the big hill. Both of us realized that we would never again see that many people surrounding the great monument. Wilbur and Orville would surely have liked that. It was the perfect end to a great year.

Dr. Tom D. Crouch
Senior Curator, Aeronautics
National Air and Space Museum
Chairman, First Flight Centennial Federal Advisory Board

Section 3 – U.S. Centennial of Flight Commission Outreach Summary

Congress saw December 17, 2003, the 100th anniversary of the Wright brothers' first powered flight, as an opportunity to educate the public about the Wright brothers' achievements and to use the story to inspire the next generation of innovators and inventors. In 1999, it created the U.S. Centennial of Flight Commission to lead a national campaign. Carter Ryley Thomas Public Relations and Marketing was selected through a competitive Request for Procurement process to lead the outreach campaign, which was based on media relations, partnerships and special events.

In reporting the outcome of the centennial of flight outreach efforts, it is important to note that the success of the campaign can be directly correlated to the enormous amount of cooperation among the U.S. Centennial of Flight Commission and its Partners. The celebration was a success largely because everyone worked together. These results could not have been achieved through the work of any one organization. Instead, it was the combined effort and tremendous dedication of Centennial Partners as well as various communities and organizations across the country and around the world that labored together to share the story of the Wright brothers.

In the research phase of the campaign, the U.S. Centennial of Flight Commission sponsored a Yanklovich Partners national phone survey in November 1999. The results of this survey showed that many people knew of the Wright brothers, but 80 percent of Americans were unaware of the upcoming anniversary. In addition, one hundred reporters were interviewed, revealing little to no awareness of the anniversary among national media. And, interviews with aerospace industry leaders indicated no major initiative to do anything to commemorate the anniversary. Qualitative research revealed that no event was planned for a major market and that there was a lack of teamwork among various organizations planning celebration events. Secondary research into past media coverage indicated that similar commemorations of historic events such as Pearl Harbor Day received wide-spread coverage, but anniversaries of inventions did not.

The U.S. Centennial of Flight Commissioners approved a strategic plan that shifted away from pure media relations and allocated more budget into coalition building and creating major market events. The U.S. Centennial of Flight Commission decided it would not sponsor individual events, but rather coordinate the national commemoration through communication with the public and the media through the Web site and a proactive media relations campaign. The first job was to re-energize the centennial team by showing what was possible. Existing regional events had to be complemented by major market celebrations that would reach the masses and build credibility, and they would have to be funded by other entities. The major market media needed a "wake up" call, and the U.S. Centennial of Flight Commission needed to find a way to keep them interested the entire year. Budget did not exist to buy a spokesperson, but the U.S. Centennial of Flight Commission team knew celebrities would capture the attention of national television. Creating an educational legacy for the campaign depended on convincing national educational material distributors to get involved. The goal was to build an efficient awareness campaign based on partnerships, special events and media relations that was spread over a 12-month period versus a single day.

The U.S. Centennial of Flight Commission outreach campaign included five main objectives:

- Create centennial events in at least two major markets to strengthen the national campaign.
- Obtain 100 major print and/or video news stories in the top national and international media outlets.
- Expose at least 10 million students to an educational story of flight.
- Ensure that Centennial Partner events meet their combined attendance goal of 14.7 million.
- Direct 50,000 unique visitors per month to the U.S. Centennial of Flight Commission Web site.

A "trickle down" strategy was used to feed information to entities in categories that had the broadest reach: top 100 national media outlets, education/youth media, centennial event organizers, industry association leaders and government agency leaders (NASA, FAA, U.S. Air Force, National Park Service).

In order to meet the above mentioned objectives, the U.S. Centennial of Flight Commission created the following strategies:

- Create and lead a national coalition of Partners that extends the reach of the celebration with minimal investment.
- Coordinate a national awareness campaign that leverages Partners and generates major stories regarding the anniversary and events in the top 100 national and international media outlets.
- Educate. Convince the largest K-12 educational media outlets to create or promote existing science/history programs and materials celebrating the anniversary of flight.

CAMPAIGN EXECUTION

Create and Lead

- *Major Market Events:* Created and recruited Centennial Partners to develop centennial events in major markets:
  - A national kick off was held at the Smithsonian National Air and Space Museum in Washington, D.C., on December 17, 2002. John Travolta, Sen. John Glenn, Dr. Neil Armstrong, the Tuskegee Airmen, Dr. Shannon Lucid and other public figures and aviation and aerospace icons participated, garnering national media coverage and setting the stage for the rest of the year. The ceremony, which celebrated the human qualities of flight, such as courage, innovation and determination, honored not only those present, but also the thousands of men and women throughout history who have made an impact on aviation.
  - A three-week event at Rockefeller Center in New York in August. Rockefeller Center held the event, which included a partnership with NBC's The Today Show and appearances by Dr. Neil Armstrong and Patti LaBelle, among others. NASA, FAA and the U.S. Air Force were exhibitors.
  - Widespread support boosted centennial awareness at events such as the Rose Bowl, the Los Angeles County Fair, the Chicago Centennial of Flight celebration, and EAA's AirVenture near Milwaukee, Wis. All events delivered strong regional messages.
- *Centennial Partners*: To position the U.S. Centennial of Flight Commission as the unifying national body, the Centennial Partnership program was created. The program gained participation from NASA, the U.S. Air Force, Rockefeller Center, FAA, the Smithsonian National Air and Space Museum, Inventing Flight, Festival of Flight, the First Flight Centennial Commission, the First Flight Centennial Foundation, AIAA, Aviation Week, The National Air Tours, Space Day Foundation and EAA.

Coordinate

- *Spokespersons*: Dr. Neil Armstrong and John Travolta participated in various aspects of the campaign for free. Other well-known public figures also became involved including Harrison Ford, Sen. John Glenn, Chuck Yeager and NASCAR's Jeff Gordon.
- *The President*: The U.S. Centennial of Flight Commission and its Partners successfully organized presidential appearances in Ohio and North Carolina.
- *Media Pool*: Developed long-term relationships with top media outlets early in the campaign to whom all Centennial Partners could pitch. Unique packages were developed for the wires and network feeds.
- *The Story Line-up*: The media strategy pushed "national event" stories that created the impression of a strong national campaign.
- *Centennial Video*: Created history of flight video that was shown in museums and airports.

Educate

- *National Education Media Push*: Newspapers in Education, Channel One, *Time for Kids* and McGraw Hill, among others, produced and distributed centennial-themed materials and promoted the U.S. Centennial of Flight Commission Web site.
- *Grassroots Education Push*: Promoted learning programs created by the U.S. Centennial of Flight Commission, NASA and others directly to teachers through user and news groups, Web sites, list serves and associations. This tactic also included working with the Aerospace Industries Association to promote a national rocketry challenge that attracted high school students from 50 states.
- *Web Site Enhancements*: Led improvements to the U.S. Centennial of Flight Commission's Web site that attracted more teachers and students. Enhancements were promoted through media relations and grassroots communications. This included: 1) a *First Flight Weather Contest* where students learned about weather and aviation on the Web site and submitted a "forecast" for December 17, 2003, and 2) educational Web games that were delivered through an e-mail campaign.

CAMPAIGN EVALUATION

- ***Major market success.*** Met objective by creating two catalytic events, one in Washington, D.C. and one in New York City.
  - Rockefeller Center generated 58 million impressions (number of people who were exposed to information), and the kick off in Washington, D.C., generated 73.8 million impressions.
- ***Significant media coverage.*** From December 2002 to December 2003, centennial stories that included key messages had a reach of 1.4 billion. (This excludes more than 1,000 local broadcast and print hits.)
  - More than 350 articles ran in the top 100 print publications, including *The Wall Street Journal*, *The New York Times*, *The Los Angeles Times* and *USA Today*. More than 110 segments ran on national networks including NBC, CBS, ABC and CNN. This represents a 250 percent increase over the objective.
  - Prior to December 2003, the campaign achieved a reach of more than 760 million.
  - A conservative estimate for total publicity value for the yearlong celebration equaled $77.5 million.
- ***Student involvement.*** More than 12 million children were exposed to the inspiring story of flight.
  - This represents a 20 percent increase over the objective.

- *The Mini Page* ran five features in more than 500 papers. A *Time for Kids* flight issue reached 4.2 million children and a Channel One Wright Flyer segment reached 8 million children.
- Educational toolkits developed by NASA and the U.S. Centennial of Flight Commission were delivered to more than 140,000 educators.
- With the help of NASA and the U.S. Air Force, educational magazines were placed in more than 500,000 airline seatbacks.
- The weather contest attracted entries from 25,000 students and was covered by The Weather Channel.

- ***Attendance took off.*** More than 22.2 million people attended the 14 Centennial Partner events. This figure does not include the millions of people who attended grassroots community events across the country.
  - U.S. Centennial of Flight Commission Partners exceeded combined attendance objectives by 51 percent. (Again, this number does not include hundreds of non-partner events that occurred across the country in 2003.)
  - The Rockefeller Center Centennial exhibit attracted more than 2.8 million visitors and immediately increased national credibility for the campaign among both reporters and the general public.
  - Examples of economic impact received from Centennial Partners include: The Smithsonian National Air and Space Museum experienced a 31 percent increase in attendance, while other museums in Washington, D.C., experienced a drop. They also experienced a 3 percent increase in gift shop revenue and an 11 percent increase in IMAX ticket sales. The Outer Banks increased December tourism revenue by $7.2 million.
- ***Visits to the Web with longer stays.*** Unique visitors to the educational Web site increased from 7,000 per month in January 2002, to 256,000 in December 2003. (Average stay time of 10 minutes.) Individual hits increased from 145,000 a month to 3.66 million a month.
  - In 2003, U.S. Centennial of Flight Commission received more than 36,000 e-mails ranging from material requests to historical inquiries.

Section 4 – Summary of Events/ Programs

U.S. CENTENNIAL OF FLIGHT COMMISSION

Summary of Event/Program

The U.S. Centennial of Flight Commission was established by the Centennial of Flight Commemoration Act, Public Law 105-389, November 13, 1998, as amended by Public Law 106-68, October 6, 1999. Congress' intent was to expand the national and international interest in the Wright brothers' achievement. The U.S. Centennial of Flight Commission was charged by Congress with playing the leading role in coordinating and publicizing public activities celebrating the achievements of Wilbur and Orville Wright and commemorating a century of powered flight. Under this mandate, the U.S. Centennial of Flight Commission planned to coordinate and encourage national and international celebrations of the Wright brothers' achievement and its impact on the world in a fashion that inspired the next generation of inventors.

Goals of the Event/Program

As an organization, the U.S. Centennial of Flight Commission had three goals:

- Harmonize and enhance all efforts to celebrate and commemorate the centennial of powered flight.
- Increase public understanding of the Wright brothers' achievements as a triumph of American ingenuity, inventiveness and diligence in developing new technologies that help define the American century.
- Engage the interest of the American public and the world in the 100 year history of flight.

Outcome of Event/Program

There were three major elements of the program: the December 17, 2002 kick off; the U.S. Centennial of Flight Commission Web site; and the educational program.

The Centennial of Flight kick off was held December 17, 2002, at the Smithsonian's National Air and Space Museum. It was emceed by John Travolta and featured aviation honorees and pioneers such as Sen. John Glenn, Dr. Neil Armstrong, the Wright family, Edsel Ford, Dr. Vance Coffman, Jody McCarrell representing the 99's, William Holten and John McGee representing the Tuskegee Airmen, Amy Kleppner representing Amelia Earhart, Gen. Tex Hill, Erik Lindbergh, Dr. Shannon Lucid and Pamela Melroy. Featured speakers included the Administrators of NASA and the FAA, Gen. J.R. Dailey, Deputy Secretary of Transportation Jackson and John Travolta. The event was widely covered by the media, including CBS, CNN, FOX, *USA Today*, *The Washington Post* and others. President Bush issued a Wright Brothers Day Proclamation that was read as part of the ceremonies and then presented to Amanda Wright Lane. NASA TV provided a satellite uplink of the ceremony so it could be viewed nationally and internationally. The U.S. Centennial of Flight Commission worked extremely hard with North Carolina and Ohio to coordinate the kick off ceremonies for all three organizations.

Section 7 of this National Report is devoted entirely to the U.S. Centennial of Flight Commission Web site, to include program content and metrics on its success.

The U.S. Centennial of Flight Commission participated in more than a dozen conferences, symposia and seminars in 2003, and promoted national and international participation in the centennial of flight through exhibits at national events and education conferences, speaking engagements, professional development workshops and student contests in the U.S. and abroad. Numerous collaborations were formed that resulted in hundreds of centennial of flight

related events and activities. Educational information and materials were presented and disseminated to millions of individuals.

U.S. Centennial of Flight Commission staff worked closely with NASA to develop dozens of centennial of flight related products. NASA's education program managers adopted centennial of flight themes that were reflected in nearly all major educational initiatives in 2002 and 2003. NASA Field Center staff also incorporated the centennial of flight theme into their educational initiatives and developed numerous educational products and activities including a comprehensive Web site.

The U.S. Centennial of Flight Commission developed numerous educational products in cooperation with NASA's Offices of Education and Aerospace Technology, which included two posters with hands-on activities featuring the Wright brothers and the scientific and engineering processes they used to successfully achieve powered flight. A bookmark was also developed with activities encouraging educators and students to explore the various educational components of the Web site and to research, plan and participate in their own centennial of flight activities and events. Education staff representing the U.S. Centennial of Flight Commission, NASA's Offices of Education and Aerospace Technology, and several Field Centers cooperatively developed numerous additional centennial of flight products that included educators' guides, bookmarks, CDs, posters, exhibits and hands-on activities. During the last four years, more than four million centennial of flight related products were disseminated to educators, students and the public in all 50 states, Puerto Rico and more than 20 countries. These products have all been extremely well received by the formal and informal education communities and are still in demand today.

The U.S. Centennial of Flight Commission's online "Calendar of Events" hosted a broad array of events related to the centennial of flight and the history of aviation. The calendar posted centennial of flight celebration dates across the U.S. and the world allowing educators to locate educational opportunities for their students and even post their own events. Event planners used the calendar to coordinate their events with others. In 2003, 116 educational activities were listed on the calendar, not including the long-term events. Overall, the events represented 25 different states and more than a dozen countries in 2003.

The U.S. Centennial of Flight Commission's education staff provided onsite support for nine education related activities that took place in North Carolina in 2003, including Women in Aviation Day; Fayetteville Festival of Flight; the International Kite Festival; and the presentations, exhibits and educational demonstrations during the First Flight Celebration. In addition, tens of thousands of educational materials were disseminated to school districts across the state, particularly in Raleigh-Durham, Dare County, Lumberton and Boone.

More than a half dozen centennial activities in Ohio received onsite U.S. Centennial of Flight Commission educational support that included assisting in the development of a Wright brothers interdisciplinary curriculum that was disseminated to all school districts in the state and hundreds of schools across the nation. Educational exhibits, speakers, activities and materials were provided to the Inventing Flight celebration planners in support of their major centennial event. An educational alliance with Wright State University (WSU) resulted in providing educators and students access to the largest collection of Wright photographs in the world via the U.S. Centennial of Flight Commission Web site. U.S. Centennial of Flight Commission and WSU educational staff also co-presented Wright-related educational information and materials to educators from across the country at the 2003 National Science Teachers Association Conference. The U.S. Centennial of Flight Commission educational staff supported two

centennial of flight themed international education conferences in Cincinnati, Ohio, sponsored by the Civil Air Patrol and Women in Aviation International. Educational workshops, materials, information and presentations were provided for hundreds of teachers from all over the country, at both conferences.

The U.S. Centennial of Flight Commission education staff and NASA's Office of Education and Office of Aerospace Technology also developed the "Centennial of Flight VIP Educational Toolkit," that became available in December 2002. The Toolkit included: an educators' guide; a poster: "The 1902 Glider: How the Problem of Control was Solved;" a NACA/NASA timeline; a 32-page, full color booklet featuring the pre-history of flight, a century of flight, the future of flight and educational resources; and four bookmarks. Approximately 140,000 hard copies of the "Centennial of Flight VIP Educational Toolkit" package were disseminated to educators in 2003.

A 32-page brochure, "Celebrating a Century of Flight," cosponsored by NASA, the U.S. Air Force and the U.S. Centennial of Flight Commission, was created and distributed to share the history of flight. The brochure was available on major airlines, in airports and distributed at various events across the country. In collaboration with NASA Headquarters and the National Coalition for Aviation Education, the 32-page "Celebrating a Century of Flight" booklet was reformatted to create a centennial of flight educational supplement that was produced by *The Washington Times* and disseminated to hundreds of newspapers across the country through Newspapers in Education. As a result, the supplement reached millions of homes and classrooms.

Centennial Legacy

The 100th anniversary of flight challenged the U.S. Centennial of Flight Commission to increase the public's understanding of the evolution of flight and the extraordinary individuals that made it possible. More importantly, it provided a tremendous opportunity to use the story of flight to inspire students across the globe to explore aviation's past and, in the process, recognize the power of dreams and the astonishing realities they can create. The U.S Centennial of Flight Commission and its Partners established an infrastructure that encouraged educators, students and the public to participate in exciting centennial of flight projects and events and enabled them to plan their own. And, as a result, millions of students across the country attended centennial of flight events, participated in classroom activities, utilized materials, and accessed resources that not only taught them about the history of aviation, but encouraged them to imagine the incredible possibilities for the future. The U.S. Centennial of Flight Commission hopes that these experiences have not only ignited their imaginations, but also provided them with the tools they need to investigate and pursue exciting aerospace-related careers and become the next generation of explorers, inventors and innovators.

Lessons Learned

It takes the combined efforts of many good people to undertake goals of this magnitude. It is only through the strength and efforts of our many Partners that we were all able to succeed. A talented marketing and media relations outreach partner is essential to the success of a national initiative such as the celebration of the centennial of flight.

INVENTING FLIGHT: DAYTON 2003

Summary of Event/Program

Inventing Flight: Dayton 2003 was the culmination of 15 years of planning by a broad public and private partnership under the auspices of The 2003 Committee. The committee was funded through a combination of public and private contributions including significant support from the

City of Dayton, State of Ohio, and Montgomery and Greene counties. Major support came in the form of philanthropic gifts from Dayton area businesses, individuals and foundations, as well as several significant corporate sponsorships. The 2003 Committee was governed by a board of public and private sector representatives. The board was chaired initially by U.S. District Judge Walter H. Rice and later by Dayton Daily News Publisher J. Bradford Tillson.

The initial focus of The 2003 Committee was the establishment of a national park around the Dayton history of Orville and Wilbur Wright and African-American writer Paul Laurence Dunbar. Legislation creating the Dayton Aviation Heritage National Historical Park was signed into law by President George H. W. Bush in 1992 and, over the next 10 years, the park was developed in time for the centennial celebration.

In addition to development of the national park, its four sites and two interpretive centers, many other bricks and mortar projects in the Dayton area were completed with the 2003 celebration in mind. These included a new wing to the U.S. Air Force Museum, a $100 million performing arts center downtown, several new structures at Carillon Historical Park, a RiverScape at the convergence of two rivers downtown and a pedestrian bridge from it to a FlightScape Plaza, many infrastructure improvements to the Dayton Air Show, and a massive revitalization of the business and residential neighborhood where the Wright brothers lived and worked.

The Inventing Flight partnership included many existing community institutions such as the Dayton Air Show, Carillon Historical Park, U.S. Air Force Museum, National Aviation Hall of Fame, Dayton Art Institute and Dayton Contemporary Dance Company to name a few. Many of these institutions already were planning major events for 2003 and agreed to have Inventing Flight package and promote them under a common celebratory brand. Inventing Flight also was designated a "signature event" of the Ohio Bicentennial, also in 2003.

One of Inventing Flight's proudest accomplishments was convincing Sen. John Glenn to serve as secretary general of the celebration. Sen. Glenn and his wife Annie attended most of the Inventing Flight activities and represented the celebration in the media and at events nationally.

The Inventing Flight program falls into three categories: (1) programs that extend beyond 2003; (2) various activities leading up to the Inventing Flight celebration; and (3) the peak, 17-day celebration in July 2003.

Programs that extend beyond 2003

There are several educational and arts programs that were developed in conjunction with the Inventing Flight Celebration that both preceded the July activities and continued afterward. The most ambitious of these is the Inventing Flight Curriculum, a multi-media middle school curriculum based on the work of the Wright brothers. It was developed in partnership with consultant Gordon L. Schimmel and ThinkTV, Dayton's public television station. Funding for development and distribution of the curriculum was provided by the Mathile Family Foundation. The curriculum has received several national awards and, for the last 18 months, has been the most requested curriculum package nationally.

Other programming created for the Inventing Flight celebration includes a Digistar program for planetaria produced by Dayton's Boonshoft Museum of Discovery, a series of flight themed dance productions created for and performed nationally and internationally by the Dayton Contemporary Dance Company, and several works commissioned by the Dayton Philharmonic Orchestra. The Dayton Art Institute curated two exhibits, one of photographs and prints and another of sculpture, for the celebration.

Various activities leading up to the Inventing Flight celebration
Several years before the centennial, Wright State University and Inventing Flight hosted a symposium on the first 100 years of flight. In the spring of 2002, the U.S. Mint introduced the Ohio Quarter, which features a flight theme, at a ceremony at the U.S. Air Force Museum. Also at the museum on New Year's Eve 2002, was a gala kick off for the 2003 celebration. Several hours later the Dayton based Wright B Flyer flew over the Rose Bowl.

May 2003 was a big month for celebration activities. On Mother's Day weekend, Wright-Patterson Air Force Base hosted a massive open house to celebrate the centennial. It featured virtually every airplane in the U.S. Air Force's inventory on display as well as demonstrations and speakers. Later that month, the U.S. Postal Service was at the U.S. Air Force Museum for a first day issue celebrating the Wright brothers. Finally, on Memorial Day weekend, the Wright B Flyer flew around the Statue of Liberty.

The peak, 17-day celebration in July 2003
Dayton's Inventing Flight celebration peaked during 17 days in July 2003. It began Independence Day Weekend with opening ceremonies and a ribbon cutting by Sen. John Glenn and Dr. Neil Armstrong followed by a spectacular fireworks display. That weekend also included a three-day hot air balloon event produced by RE/MAX at the U.S. Air Force Museum and a folk music festival at RiverScape downtown. The media highlight of the weekend was a July Fourth visit by President Bush who spoke to an enthusiastic crowd of 30,000 at the U.S. Air Force Museum and to a national television audience.

The second weekend included a blimp meet with four of the giant airships floating across the skies over Dayton. The Dayton Black Cultural Festival featured a reunion of the Tuskegee Airmen and Dayton Contemporary Dance Company's performance of its flight productions.

The final week included the AIAA/International Council of the Aeronautical Sciences (ICAS) Flight Symposium focusing on the next 100 years of flight. John Travolta was honored by AIAA at a formal dinner. The celebration concluded with a four-day Dayton Air Show that included both the U.S. Air Force Thunderbirds and U.S. Navy Blue Angels along with the Canadian Snowbirds flying each day. One of the more unusual flights was a Boeing 707 piloted by John Travolta with Sen. John Glenn as passenger. Saturday night featured a reunion of enshrinees attending the National Aviation Hall of Fame annual dinner hosted by Harrison Ford. Sunday's highlights included a moving ceremony at the Wright brothers' grave site featuring Dr. Neil Armstrong, Sen. John Glenn and members of the Wright family.

Throughout the 17 days, Carillon Park produced "living history" re-creations of events from the turn of the 20th century at the Dayton Aviation Heritage National Historical Park sites, and Inventing Flight's Celebration Central at Deeds Point featured four massive pavilions, main stage entertainment and a variety of other activities including an evening lighted barge show.

Goals of Event/Program
Inventing Flight set the following goals for the celebration:

- Promote regional identity and economic development.
- Foster positive self image.
- Drive visitation and tourism.
- Complete facilities.
- Enhance local organizations.
- Strengthen relationship with the U.S. Air Force.

Outcome of Event/Program
An estimated 716,000 people attended the July 2003 Inventing Flight events. People who attended more than one event were counted more than once. This included an estimated 150,000 people at the four-day Dayton Air Show and 100,000 at the July 3 opening ceremonies and fireworks. Other major attendance contributors were Celebration Central with 75,000, Dayton Black Cultural festival with 65,000, CityFolk Festival with 60,000 and the blimp meet with 53,000. Surveys conducted during the celebration indicated roughly 80 percent of visitors were from the region and 20 percent were overnight travelers, approximately the breakdown anticipated.

One of the main goals of Inventing Flight was to market the region, and the event exceeded all goals. Inventing Flight spent nearly $2 million on paid advertising in 2002 and 2003 and it is estimated that advertising created more than 100 million impressions nationally. No advertising was purchased outside the U.S., but some of the publications used did reach an international audience. The www.inventingflight.com Web site attracted between 250,000 and 300,000 unique visitors in July 2003 alone. Since its inception, more than one million people have visited the Web site.

Print and broadcast coverage of the events in Dayton was extensive with most major U.S. and many foreign newspapers running stories about the celebration. Secretary General John Glenn was on the cover of *Parade* magazine. Many travel sections, including *The New York Times*, did extensive pieces on Dayton aviation heritage sites and the celebration. *American Heritage* magazine highlighted Dayton. All of the major television networks covered the Dayton celebration at one time or another and CBS broadcasted live from the Dayton Air Show.

The economic impact of the celebration still is being calculated. A team of economists at Wright State University is wrapping up a comprehensive economic impact study. A feasibility study commissioned by Inventing Flight in 1997 estimated the likely direct economic impact at $110 million.

Between 1998 and 2003, Inventing Flight directly spent more than $20 million. It is estimated that programming partners spent another $8-10 million in 2003. In addition, Inventing Flight can account for $63 million in investments in anticipation of the celebration. These include development of the national park sites, improvements in the Wright-Dunbar Neighborhood, construction of the FlightScape Plaza and other construction directly related to the celebration. Another $30 million in improvements was influenced by centennial plans.

Local economic development organizations used the celebration to attract attention and entertain prospects. The Dayton Development Coalition has said it expects several of those prospects to bear fruit.

Centennial Legacy
Some legacies are readily apparent while others will take time to fully manifest themselves. There are impressive and lasting bricks and mortar legacies. The most significant by far is the Dayton Aviation Heritage National Historical Park which was developed in roughly half the time of most national parks because of the 2003 deadline. It used the celebration as a platform to introduce itself to the growing heritage tourism market. The second most important structural legacy is the continuing transformation of Wright-Dunbar from a largely abandoned urban dead zone to an increasingly vibrant commercial and residential neighborhood.

Other tangible legacies range from the FlightScape Plaza at Deeds Point where visitors continue to have their pictures taken with Orville and Wilbur to the new wing at the U.S. Air Force Museum to RiverScape to the permanent improvements at the Dayton Air Show. The Dayton Art Institute installed a massive, soaring sculpture by John Safor, the same artist who did the signature piece for the Smithsonian's Steven F. Udvar-Hazy Center at Dulles International Airport. Even such relatively inexpensive items such as the highway signage identifying historic sites continue to have a positive impact.

Some content produced for the celebration will have an enduring legacy. Certainly the Inventing Flight Curriculum and the Digistar program will be used for years to come. That is equally true for the flight themed dance pieces commissioned by Dayton Contemporary Dance Company. Recently Carillon Park announced plans to continue the "Time Flies" living history works it produced for the celebration. In a real sense, the Ohio Quarter is a legacy of the centennial.

Another legacy is the benefit received by existing organizations in Dayton. Inventing Flight, with considerable assistance from the U.S. Centennial of Flight Commission, helped create and market a platform on which many local organizations and institutions could be seen by a national audience. Every partner benefited from this relationship.

Potentially the most significant legacy will take longer to judge. That is the image of Dayton that was created through the Inventing Flight celebration and the marketing of it. Based on conversations with many people around the country, Inventing Flight succeeded in telling the story of Dayton and the Wright brothers. Inventing Flight's marketing efforts were reinforced by a host of articles, books, television specials and other media that told the Wright brothers' story. Thanks to Sen. John Glenn, Dr. Neil Armstrong, the U.S. Air Force and NASA, the message that leading edge aerospace research continues in Dayton and Ohio 100 years after the Wright brothers first flew was delivered as well. That message was a strong element of President Bush's remarks during his visit July 4, 2003.

Finally, there is no question that residents of the Dayton area and Ohio felt great pride in the centennial celebration and the recognition received by two sons of Ohio. The residual of that continues.

Lessons Learned

Probably the biggest lesson was the importance of partnerships. Almost all of the programming created for Inventing Flight was the result of partnerships, both local and national. The existence of the U.S. Centennial of Flight Commission was critical to partnerships with EAA, NASA, FAA and AIAA, among others. It strengthened Inventing Flight's existing relationship with North Carolina.

Certainly one of the lessons painfully learned in Dayton was the risks of revenue models. Partly due to bad weather the first week of the celebration and partly due to flawed pricing and other factors, Inventing Flight's Celebration Central did not meet attendance and revenue projections resulting in a substantial debt that is now mostly settled. On the positive side of the financial equation, the generous support of local government, business and individuals was key to Inventing Flight's success. Local philanthropy and government support created much of what Inventing Flight was able to sell to sponsors.

Another lesson learned, or at least reinforced, was the importance of marketing. Since telling Dayton's story and creating a positive image of the community was a major goal of Inventing Flight, marketing was critical to success. As noted above, Inventing Flight did a lot of marketing

but just as important was the marketing done by the U.S. Centennial of Flight Commission and its other partners. All of it reinforced the message that something important happened in 1903, something worth celebrating in 2003.

The importance of celebrities and having their faces and their stories associated with this event was manifest throughout the year. It is impossible to overestimate the impact of having Sen. John Glenn as Inventing Flight's national spokesperson. Two of the most talked about and covered images of the centennial were joint appearances by Sen. John Glenn and Dr. Neil Armstrong at the Ohio Quarter rollout and the July opening ceremonies. The involvement of John Travolta and Harrison Ford in celebration activities brought additional coverage and public interest. Members of the Wright family became much interviewed celebrities during the centennial and they served as extraordinary ambassadors for Dayton.

Finally, Inventing Flight learned all over again how compelling the story of the Wright brothers and early powered flight is. It engages people of all ages and backgrounds. Appropriately, it was the keystone of the centennial celebration.

NORTH CAROLINA
Summary of Event/Program
Wright Brothers National Memorial was the site of a six-day celebration beginning on Friday, December 12, 2003, and ending on Wednesday, December 17, 2003. The theme and a few highlights of each day are listed below.

- **"Igniting The Imagination,"** Friday, December 12, 2003, was designed to inspire the next generation of aviators by engaging children of all ages in the power of flight. Highlights included: The Raleigh Boychoir; Space Talk/NASA Downlink; Candy Bomber Demonstration; Afterburner, Inc./Flight Plan for Life; greetings from North Carolina's First Lady, Mary Easley; and performer Michelle Branch.
- **"Remember the Past, Imagine the Future,"** Saturday, December 13, 2003, was designed to highlight historic sites throughout North Carolina and to remind people that you can have fun while learning about history. Highlights included: historical re-enactors dressed in period costume; 20 person jump team; NASA panel discussion; performance by The Beach Boys on the main stage; greetings from North Carolina's Secretary of Cultural Resources Libba Evans; and welcoming from members of the Life Saving Station in Kitty Hawk.
- **"Remember the Past, Imagine the Future,"** Sunday, December 14, 2003, was designed to highlight the history of the Outer Banks of North Carolina. This was a day to honor the descendents of the witnesses of the first flight. Highlights included: Aviation Legends panel discussion; Col. Bob Morgan presentation; The Temptations; Decedents luncheon; and the Discovery channel video about the Wright brothers.
- **"Protecting the Home of the Brave,"** Monday, December 15, 2003, was designed to honor veterans and the men and women who are now serving in the armed forces. Highlights included: air show featuring all branches of the military; jumpers representing the U.S. Army, U.S. Navy, U.S. Air Force and U.S. Marine Corps; Challenger the Eagle; performer Aaron Tippin; "Winning the Wings" by Jimmy Stewart; and performances by military bands.
- **"In History's Footsteps,"** Tuesday, December 16, 2003, was designed to pay tribute to The First Flight Society in honoring their traditions. Highlights included: 100 aviation heroes ceremony including representation from Sen. John Glenn, Dr. Neil Armstrong and Dr. Buzz Aldrin; presenters included Sen. Elizabeth Dole and Gen. Ralph E. Eberhart; special performance by Aaron Tippin; 100 person jump team; presentation of Orville and Wilbur

painting by The First Flight Society to Amanda Wright Lane and Stephen Wright; and the dedication of the bronze statue "First Flight" by Governor Mike Easley and Secretary Gale Norton.

- **"12 Seconds that Changed the World,"** December 17, 2003, was designed to commemorate the 100th anniversary of humankind's first successful flight in a powered aircraft. Highlights included: participation by President George W. Bush, Secretary Gale Norton and Governor Mike Easley; Master of Ceremonies John Travolta; Lee Greenwood singing the National Anthem; Marine One fly by; Air Force One fly by; and attempt to recreate the First Flight in a 1903 replica.

The six-day event included interpretative talks every day by park staff in the Visitors Center, interpretative talks in the reproductions of the Wrights' workshops, tours of the flight line of the first flight, and a display of the Wright Flyer replica donated by Mr. Harry Combs. Exhibits were provided by NASA, Dare County Schools, Academy of Model Aeronautics, U.S. Air Force Command and Control, U.S. Coast Guard, U.S. Fish and Wildlife, The First Flight Society, Outer Banks Stamps, U.S. Postal Service, Aircraft Owners and Pilots Association and the FAA.

Goals of Event/Program

The goal of the First Flight Centennial Commission was to execute the four components from which the North Carolina First Flight Centennial Commission was founded: education, commemoration, celebration and legacy. The National Park Service's mission was to tell the story of the Wright brothers. The goals were easily merged into one comprehensive educational program. The resultant collaborative planning team had the mission of creating a multi-dimensional event with mass appeal to tell the story using various mediums.

Outcome of Event/Program

The six-day celebration had a total public attendance of approximately 115,000 people. The highest attendance was on December 17, 2003, when more than 34,000 people attended. There were millions worldwide that saw the event on television.

A preliminary report from Carter Ryley Thomas Public Relations and Marketing Counsel reveals:

- Nationwide coverage in *USA Today*, *Parade*, *Time* and *Popular Science*; and coverage on all three major television network morning shows, Good Morning America, The Early Show and The Today Show, as well as CNN, CNN Headline News, C-Span and The Weather Channel.
- Attendance of more than 800 journalists present for multiple days of the six-day celebration.
- Affiliate network feed to ABC, CBS, CNN and NBC which generated nationwide coverage through local news/programming across the country.
- Coverage from all seven regional network affiliates: Norfolk (WVEC-ABC, WTKR-CBS, WAVY-NBC), Raleigh (WRAL-CBS, WTVD-ABC, WNCN-NBC) and Greenville (WITN-NBC).
- Live coverage of the flight re-enactment on three of the regional networks including a statewide broadcast in North Carolina.
- Front page coverage in 24 of the top 25 daily newspapers including *USA Today*, *The Los Angeles Times*, *The Washington Post* and *The Dallas Morning News*.
- International broadcast coverage on BBC, Telemundo, Nine Network Australia, Eurovision and Canada TV.

Visitor statistics for the Web site showed 1,806,536 total hits and 40,135 unique visitors in November; 4,793,905 total hits and 147,408 unique visitors in December; and 581,444 total hits and 26,426 unique visitors in January 2004.

Centennial Legacy

At Wright Brothers National Memorial, the legacy of the Centennial can be measured in very tangible ways. Enhancements to the park resulting from the Centennial celebration include:

- A new 15,000 square foot Pilot Facility.
- Trails and the plaza at the top of Kill Devil Hill.
- 20,000 square foot Pavilion with auditorium space for 1,000 seats and space for exhibits.
- New entrance to Wright Brothers National Memorial.
- New fee booths.
- Wright Flyer replica given by Mr. Harry Combs and dedicated on December 17, 2003.
- Outer Banks at the Turn of the Century exhibit.
- Portrait of Orville and Wilbur Wright painted for this event on permanent loan from The First Flight Society and presented to Amanda Wright Lane and Stephen Wright on December 16, 2003.
- Cirrus Aircraft donation of an exhibit to the park.
- A gift from the North Carolina Department of Cultural Resources of a bronze statue depicting the first flight was installed at the Wright Brothers National Memorial.
- Increased visitation to the park.

Lessons Learned

- Partnerships are key to a successful event.
- Manage expectations.
- Establish a mission and be true to that vision.
- The team is only as strong as its weakest link; establish a strong team and pull together.
- Be consistent with key messages.
- Legacy is a key component to the event; leave something for future generations.
- Involve the local business community.
- Volunteers are ambassadors to the event; they are key to success.

EXPERIMENTAL AIRCRAFT ASSOCIATION (EAA)

Summary of Event/Program

- **Unveiling of the Flyer, March 23, 2003, Washington, D.C.**
  EAA unveiled its 1903 Wright Flyer reproduction constructed by The Wright Experience at a national press event at Reagan National Airport. Preliminary findings of the wind tunnel testing were announced. Guests included Gen. J.R. Dailey, Smithsonian National Air and Space Museum and Chairperson of the U.S. Centennial of Flight Commission; Scott Crossfield, EAA's volunteer pilot trainer; Dr. Bob Ash, Old Dominion University; Jan Valentic, Ford Motor Company; Len Bruno, Library of Congress; and media.
- **Sun 'n Fun Fly In, April 2-8, 2003, Lakeland, Fla.**
  Provided the first opportunity for the public to view the authentic '03 Flyer, virtually fly it through Microsoft's Flight Simulator and vote for the Greatest Aviation Innovation. Pavilion guests included: Greg Herrick, National Air Tour; Amanda Wright Lane, Wright family representative; and 50,000 other guests of the event.
- **Ford Motor Company's 100th Anniversary, June 12-15, 2003, Dearborn, Mich.**
  The Outer Banks Visitors Bureau was integrated as a partner in EAA's Countdown to Kitty Hawk Program. Pavilion guests included: Edsel Ford II, Ford Motor Company; Stephen Wright, Wright family representative; Darrell Collins, National Park Service; Charles Taylor II, Taylor family representative; and 75,000 other guests of the event.

- **Inventing Flight, July 3-20, 2003, Dayton, Ohio**
  EAA's Countdown to Kitty Hawk Pavilion served as one of four featured pavilions of "Celebration Central." Pavilion guests included: Amanda Wright Lane, Stephen Wright, Sen. John Glenn, James Tobin and 70,000 other guests of the event.
- **EAA AirVenture, July 29-August 4, 2003, Oshkosh, Wis.**
  FAA Administrator Marion Blakey presented the Special Airworthiness Certificate for EAA's 1903 Wright Flyer. NASA unveiled its commemorative centennial mural commissioned through Bob McCall. The media launch of Microsoft Flight Simulator's "A Century of Flight" was accomplished. Pilots of the century Terry Queijo and Kevin Kochersberger were introduced. Northrop Grumman was welcomed as a supporting sponsor of the program. Pavilion guests included: Libba Evans, State of North Carolina; Brad Tillson, Inventing Flight; Jim and Steve Hay, engine builders for the '03 Flyer; Ken Hyde, The Wright Experience; Dr. Tom Crouch, Smithsonian National Air and Space Museum; FAA Administrator Marion Blakey; Rich Milburn, Northrop Grumman; and 90,000 other guests of the event.
- **Museum of Flight, August 23-September 1, 2003, Seattle, Wash.**
  Debuted with Museum's new "Birth of Aviation" exhibit, featuring never before displayed early documents of the Wright Company that were long believed lost or destroyed. Microsoft Flight Simulator software was showcased.
- **Discovery Channel Documentary, September 19-December 17, 2003**
  A two-hour special, "Wright Brothers - First in Flight," premiered on September 19. Construction of EAA's 1903 Wright Flyer, completed by The Wright Experience, and the training of pilots under the direction of Scott Crossfield were featured. Walter Cronkite, Dr. Tom Crouch and Dr. Peter Jakab, among others, were interviewed. A three-hour special aired on December 17, highlighting activities related to the flight re-creation.
- **National Business Aviation Association Convention, October 7-9, 2003, Orlando, Fla.**
  Final public appearance of EAA's Flyer before the first flight centennial celebration in December. Announced people's choice of the jet engine as the greatest aviation innovation of the last 100 years with more than 16,000 votes cast. There were 20,000 guests in attendance.
- **Encampment, November 2003, Outer Banks of North Carolina**
  Demonstrated to the world that the Wrights were the first to achieve flight with their 1903 Wright Flyer and clearly established EAA's reproduction as the only truly authentic reproduction through successful test flights on November 20 and December 3. Provided invaluable training opportunities for the Pilots of the Century, Terry Queijo and Kevin Kochersberger, under the direction of Scott Crossfield. Tested and confirmed preparedness to repair anticipated damage to the Flyer in a remarkably short period of time.
- **First Flight Centennial Celebration, December 2003, Outer Banks of North Carolina**
  Fulfilled the invitation to serve as the exclusive aviation entity to attempt flight of an authentic 1903 Wright Flyer on the hallowed grounds of the Wright Brothers National Memorial. Hosted an unrivaled VIP experience for EAA and FAA leadership, centennial officials, aviation pioneers, and leaders of the business community. Honored the one millionth Young Eagle.
  - Every major news outlet was on hand in Kill Devil Hills to report live on this very special day. In addition, three consecutive prime time hours on Discovery the evening of December 17 told the story in a manner beyond sound bites and informed the public of the enormous challenges and resulting commitments made to commemorate the Wrights' achievement.

Goals of Event/Program
The goals of EAA's program were to:

- Assume and maintain a leadership role in the centennial celebration.
- Increase the awareness of the Wright brothers' achievement.
- Increase visibility for aviation.
- Increase visibility for EAA with the public, aviation community and government arena.
- Develop a sense of pride in EAA members, knowing that their organization took an active leadership role in the centennial celebration.
- Successfully fly an authentic reproduction 1903 Wright Flyer at Kitty Hawk, N.C.

Outcome of Event/Program
Media coverage of the flight centennial was international in scope. In Kill Devil Hills alone, there were more than 800 media representatives registered, representing journalists from four different continents. Countdown to Kitty Hawk activities were broadcast to the world on outlets such as CNN, and worldwide outlets including BBC. Voice of America interviewed EAA and Countdown to Kitty Hawk representatives. Newspaper reports from Kitty Hawk appeared in newspapers as far away as Europe, Japan and India. A conservative estimate of mentions of EAA included more than 21,000 column inches of text during calendar year 2003, creating more than 88 million print impressions. Print reports that highlighted Countdown to Kitty Hawk or the Wright Experience without specific EAA mention easily surpassed 100 million just in the U.S. Coverage of the flight centennial activities was prominent in the top newspapers in every state, many of which also included separate features that highlighted local flight centennial programs.

EAA's Countdown to Kitty Hawk attracted near record traffic to the EAA Web site, and on December 17, nearly 30,000 individuals viewed nearly 100,000 pages of the Web site. This is the highest number of visitors in one day to EAA's Web site since the previous record day following the terrorist attacks on 9/11. Also on December 17, EAA's main Web site, www.eaa.org, attracted nearly 25,000 visitors. During EAA's centennial celebration in Oshkosh, Wis., nearly 400 participated in the first ever Web cast from the EAA AirVenture Museum's Eagle Hangar.

EAA connected with children, families, members, organizations, institutions and government officials. Perhaps as many as one billion media impressions were created throughout the program. There were one million Young Eagles. Nearly 400,000 people toured the pavilion. There were 16,000 people who cast a vote for the Greatest Aviation Innovation in person or via the Internet. More than 8,000 EAA members signed the logbooks.

Centennial Legacy
The legacy of the centennial can be measured in the following ways:

- Raised awareness and appreciation for the skill, work and innovation of Orville and Wilbur Wright.
- Commissioned an authentic reproduction of the '03 Wright Flyer, and wind tunnel tested and flew the aircraft at an encampment on the Outer Banks. This process unlocked valuable information about the Wright brothers' innovation, reinforcing that they were in fact the first to successfully obtain powered flight.
- Created excitement, visibility and anticipation for this once-in-a-lifetime celebration, the 100th anniversary of flight.
- "Congratulations on a great effort by you and EAA and your success in properly celebrating the Centennial. As we discussed last week, the entire year was a great benefit to aviation

and the flying fraternity. All the things you did were substantial contributions to the celebration." -- Neil A. Armstrong.

FEDERAL AVIATION ADMINISTRATION (FAA)

Summary of Event/Program

FAA's Centennial of Flight Committee set goals and executed a national FAA plan for the centennial year. Activities promoted the Centennial, the FAA and the concept of aviation as a vital force in 20th century life.

Goals of Event/Program

The goals were to develop and execute agency plans which would celebrate the centennial of flight, provide a positive aviation and aerospace message to the flying public, bolster faith in aviation safety, inspire learning, and raise aviation career awareness for a future aerospace workforce.

Outcome of Event/Program

FAA centennial of flight accomplishments include:

- Aviation Education Outreach Programs developed, supported and executed 171 centennial of flight events throughout the country that reached 495,087 students, 17,685 educators and 1,832,131 general public.
- Creation of a state of the art FAA exhibit for use at high volume centennial events and beyond.
- Restoration and inclusion of FAA's DC-3 "N34" on the National Air Tour 2003.
- Development of FAA Air Traffic exhibit at the Smithsonian National Air and Space Museum's new Udvar-Hazy Center at Dulles International Airport.
- Development of FAA Centennial Web site.
- Development and execution of signed Governors' Proclamations in all 50 states promoting centennial awareness.
- A new FAA centennial logo branding the message "Charting the Next Century of Flight."
- Design and distribution of two new centennial posters.
- Joint FAA and U.S. Postal Service ceremonies commemorating the Centennial of Flight stamp, postmark and cachet.
- Technical and manpower support to the national centennial kick off at the Smithsonian National Air and Space Museum; Festival of Flight, Fayetteville N.C.; Inventing Flight, Dayton, Ohio; AirVenture, Oshkosh, Wis.; Rockefeller Center; New York City; and Wright Brothers National Memorial, North Carolina.

FAA museum exhibits were visited by hundreds of thousands of people from the U.S. and around the world. The outcome created a better informed aviation and aerospace public and sparked a renewed interest in aviation and aerospace classroom curriculum and career planning.

Centennial Legacy

The centennial provided an opportunity to educate the public about aviation and aerospace history and to instill a national pride in the nation's significant achievements. The legacy of this commemoration will be a fertile groundwork for new educational opportunities.

Lessons Learned
FAA worked with many national partners in accomplishing its goals. Although FAA had already known the value of joining forces, it was wonderful to reaffirm that collaboration with the aerospace industry, government, military and other aerospace organizations maximized everyone's resources and created a culture of non-partisanship that will continue into the future.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

Summary of Event/Program
December 17, 2003, marked the 100th anniversary of the first sustained, controlled, powered, heavier-than-air flight. A century ago on this date, two brothers from Ohio first flew on the wind swept sand of Kitty Hawk, N.C., changing the world forever. NASA and its predecessor, the National Advisory Committee for Aeronautics (NACA), contributed greatly to the advancement of flight over the 85+ years of their existence.

NASA's program to celebrate the centennial of flight was accomplished through a series of activities summarized below.

- **Support for the U.S. Centennial of Flight Commission**
  NASA played a key role in the support of the U.S. Centennial of Flight Commission. The NASA Administrator is one of the six commissioners. NASA supplied staff, facilities, History and Education Panel chairpersons and members, Source Selection Committee members, and services to expand the outreach capabilities of the U.S. Centennial of Flight Commission supported events. NASA television supported centennial events including the U.S. Centennial of Flight Commission's kick off event, live telecast of Space Day activities and a live feed of the First Flight Celebration activities in North Carolina. The final support given to the U.S. Centennial of Flight Commission is the transition of the Commission's Web site to the NASA History Office.
- **International Space Station Centennial of Flight Downlinks**
  Downlinks from the International Space Station were made available to promote the centennial of flight. A series of live downlinks were accomplished over the centennial year. Two centennial of flight taped downlinks were produced and provided to centennial events. The first taped downlink featured the Expedition 7 crew and the second featured the Expedition 8 crew. A scale model of the 1903 Wright Flyer with a 10-inch wingspan and weighing less than two ounces constructed by Orono, Maine, middle school students was carried as part of NASA's "Educational Payloads" program to the International Space Station by the Expedition 7 crew. The model was used by each of the crews in various downlinks and activities.
- **Education**
  NASA produced a series of curriculum materials, video programs, electronic media and resources relative to the centennial of flight, NASA's contribution to the history of flight, and its ongoing role in the future of flight both in the air and in space. These materials included posters, Web sites, exhibits, lesson plans, resources and publications written for elementary and secondary school audiences and beyond. In addition, NASA, in partnership with the U.S. Centennial of Flight Commission, created and produced a participation guide for educators.
- **Centennial Posters and Online Resources**
  In cooperation with the U.S. Centennial of Flight Commission, two posters about the Wright brothers' processes of invention and innovation were produced. These were *The Wright Way: Innovation Through Engineering* and *The Wright Way: Process of Invention*. A third

poster, *The 1902 Glider: How the Problem of Control was Solved,* was later published. *The First Century of Flight: NACA/NASA Contribution to Aeronautics* is a timeline highlighting NACA and NASA contributions to aeronautics and can be found at history.nasa.gov/centtimeline/index.html. More than 150,000 of each of *The Wright Way* posters, 230,000 of the 1902 Glider poster and 335,000 aeronautics posters were produced and distributed. These posters can be found on NASA's Spacelink and on the U.S. Centennial of Flight Commission's Web sites. Other online resources include: *Reliving the Wright Way,* which focuses on the centennial and how the processes the Wright brothers used are tied to current NASA research (wright.nasa.gov), and the *Exploring Aeronautics* compact disc and Web site (exploringaerospace.arc.nasa.gov), which provide an introduction to flight and teach students about the tools of aeronautics that are used to test aircraft designs today.

- **Video Programs**
  NASA produces a series of award-winning educational video products which had centennial of flight themed episodes throughout the last few years. These series include: *The NASA* SCIence *Files* for grades 3-5, and *NASA CONNECT* for grades 6-8, which air on more than 80 PBS Stations, NASA TV and the Internet, and are currently used by 397,000 educators representing 13.7 million students; and *Destination Tomorrow* for lifetime learners which airs on 560 local cable access and ITV channels, 35 PBS stations and NASA TV, with a potential audience of 136 million.
- **NASA Centennial of Flight Exhibit**
  Developed in honor of the centennial of flight, NASA's new 10,000 square foot centennial of flight exhibit, "Powering Flight, Powering Dreams," traces the history of powered flight in America and the evolution of modern marvels. The exhibit invites visitors to learn how NASA research has gone from the lab to the runway and the launch pad. Exhibit themes include the history of ground based flight research, unique research aircraft, advanced satellite systems, space travel, and exploration of the solar system and deep space. The exhibit explores the safety and health initiatives that have been integral to NASA's work from the very beginning to the consumer products that have revolutionized daily life. NASA continues to work toward aircraft innovations that will produce advanced propulsion systems with reduced noise and emissions, dramatically increased efficiency and capacity of the airspace system, and decreased vulnerability of aviation to terrorist and criminal acts. The celebration of a century of powered flight offers a unique opportunity to focus attention on the many successes of NACA and NASA, as well as NASA's contributions to the future of flight. The exhibit features interactive displays, a microgravity demonstrator, airplane and spacecraft models, and several NASA scientists and engineers, all intended to inspire the next generation of explorers. Visitors can check out a moon rock, operate a wind tunnel and take home NASA materials. The exhibit traveled to all major centennial events throughout 2003, supporting many of NASA's Centennial Partners' activities, including Festival of Flight, Inventing Flight, Centennial of Flight Event at Rockefeller Center, AirVenture 2003, Los Angeles County Fair and First Flight Celebration. At many of these venues, NASA provided exhibits; speakers, which included pilots and astronauts; aircraft; and educational programs and materials.
- **"Celebrating a Century of Flight" Brochure**
  The brochure, "Celebrating a Century of Flight," cosponsored by NASA, the U.S. Air Force and the U.S. Centennial of Flight Commission, covers the history of flight to current NASA and U.S. Air Force programs. The brochure was available on major airlines, in airports and distributed at numerous events across the country. In cooperation with *The Washington Times*, the brochure was converted into a newspaper format and made available to Newspaper in Education professionals. More than 100 newspapers participated. NASA

distributed a million copies and the U.S. Air Force distributed another million. The total distribution was more than three million copies.

- **"Realizing the Dream of Flight" NASA Centennial of Flight History Conference**
  On November 5, 2003, some of the country's most distinguished aerospace historians gathered at the Great Lakes Science Center in Cleveland, Ohio, to honor the Wright brothers' invention, along with the advancements of other scientists and engineers who made human flight one of the most important technical achievements of the 20th century. The symposium sponsored by NASA, the U.S. Centennial of Flight Commission and local sponsors was divided into three panel sessions that profiled "Dreamers and Doers," "Barnstormers and Entrepreneurs" and "Aerospace Leaders and Managers." *The Cleveland Plain Dealer* carried two advertisements and had a very positive follow up article the day after the event. There were 176 attendees at the conference which was carried as a live Web cast worldwide on NASA TV.
- **Publication of Popular and Scholarly Work**
  Each year NASA produces and publishes a number of publications. Many of these took on a centennial theme and many NASA center newspapers carried centennial articles. NASA also supported many publications that were having special centennial issues. The NASA History Office produced or supported more than 25 publications during this period, including: James R. Hansen, *The Wind and Beyond: A Documentary History of NACA/NASA Aerodynamics Research*, Vol. 1 (NASA SP-2002-4409); Arthur Renstrom, *Wilbur and Orville Wright, A Bibliography* (NASA SP-2002-4527) and *A Reissue of A Chronology Commemorating the Hundredth Anniversary of the Birth of Orville Wright August 19, 1871* (NASA SP-2003-4532); Roger E. Bilstein, *Testing Aircraft, Exploring Space: An Illustrated History of NACA and NASA* (John Hopkins 2003); Anne Collins Goodyear, Roger Launius, Anthony Springer and Burt Ulrich, *Flight: A Celebration of 100 Years in Art and Literature* (Welcome Books 2003); Anthony M. Springer, *Aerospace Design: Aircraft, Spacecraft, and the Art of Modern Flight* (Merrell 2003).
- **Wind Tunnel Testing Wright Replicas**
  Since 1999, NASA has wind tunnel tested a series of Wright Flyer replicas. Tests of a full scale replica of the 1903 Wright Flyer constructed by the AIAA Los Angeles Section were conducted at NASA's Ames Research Center. Project engineers studied the replica's stability, control and handling at speeds up to 30 mph. In November 2003, engineers at NASA Ames Research Center, in collaboration with the Wright Again Project, tested original Wright airfoils (wing prototypes) created by the Wright brothers for the 1903 Wright Flyer. The airfoils were tested in NASA Ames Research Center's two foot by two foot low speed wind tunnel according to the procedures detailed in the Wright brothers' original test records. The tests provided researchers and historians with insights as to the Wright brothers' thinking on aerodynamics. A historically accurate reproduction of the 1903 Wright Flyer airplane built by the Wright Experience underwent aerodynamic testing in the Full Scale Tunnel owned by NASA's Langley Research Center and operated by Old Dominion University. The Wright Experience and Old Dominion University, with support from NASA, built and tested 1901 and 1902 Wright glider reproductions along with a suite of Wright propellers in their quest to "reverse engineer" the early Wright aircraft. This testing resulted in articles and spots on CNN and TV stations in more than 20 major markets and dozens of newspapers. Total coverage reached almost eight million people for the February 2003 Wright Flyer story.
- **Grammy Nominated NASA Centennial Song and Centennial Mural**
  Singer Patti LaBelle was nominated for a Grammy for her rendition of the NASA commissioned centennial of flight song "Way Up There" written by Tena R. Clark. NASA's Dryden Flight Research Center commissioned artist Dr. Robert T. McCall to paint a 6 foot by

18 foot panoramic mural entitled "Celebrating One Hundred Years of Powered Flight, 1903-2003." A 30 foot enlargement of the mural is on permanent exhibit in the entrance to the Smithsonian's Steven F. Udvar-Hazy Center. More than 175,000 posters and reports featuring the mural and the master study were distributed.

- **Aerospace Design: The Art of Engineering from NASA's Aeronautical Research**
  NASA and the Art Institute of Chicago organized an exhibit exploring the history of aerospace engineering and its relationships to architecture and design. Aerospace Design presents a visual survey documenting NASA's aerospace history and the architects and builders, aerospace engineers and scientists behind it. Including some 65 artifacts, the exhibition displays objects ranging from handcrafted wind tunnel models of early biplanes to models of the Space Shuttle and some of NASA's latest research concepts. Like sculpture, the handcrafted models created by NASA craftsmen are visually powerful and aesthetically striking. They illustrate how aviation related forms can be as beautiful as they are functional. The exhibition debuted at the Art Institute of Chicago where 83,000 people visited it, and it is now at the Octagon in Washington, D.C. The exhibit travels for three years to other museums. Reviews appeared in *The Chicago Tribune* and *The Wall Street Journal*. Merrell Publishers in London published a companion volume with reviews in magazines including *Vanity Fair* and *Air and Space*. A pair of pop up photographic versions of the exhibits measuring 60 linear feet are currently touring airports and other venues across the country.
- **Centennial Speakers, Colloquium, Symposiums and Air Shows**
  NASA, through its centers, partnered with community organizations and their visitor centers and local museums to provide speakers, sponsor numerous series of speakers, and provide centennial exhibits highlighting the advancements in flight and the future of flight. Informational and educational materials were distributed at many of these events. NASA supported a number of national and local air shows with exhibits, speakers, aircraft and materials, all with a centennial theme. NASA's Active Aeroelastic Wing F/A-18A Hornet, the first aircraft to bear the official U.S. Centennial of Flight Commission logo, was displayed along with many of NASA's other aircraft. In addition to air shows, NASA supported many state fairs and other local events. More than a million people attended these activities.

Goals of Event/Program

NASA committed to support the U.S. Centennial of Flight Commission in the promotion and dissemination of the accomplishments of flight that were made over the last century, and show the wondrous things the next century of flight may bring. NASA's goal was to provide a legacy through a series of activities including events, speakers, exhibits, publications and a series of education activities.

Outcome of Event/Program

NASA estimates that more than 7.5 million people were reached directly by NASA exhibits. More than four million educational and informational publications were produced and distributed. Approximately 150 million people were reached through educational TV shows, while hundreds of millions of people around the world were reached through all other forms of media.
This report is only a brief summary of the many activities NASA undertook and participated in during the centennial of flight. Additional information can be referenced in the report *NASA Contributions to the Centennial of Powered Flight* (NP-2004-04-343-HQ) available online at www.nasa.gov.

Centennial Legacy

NASA partnered and collaborated with numerous government and nonprofit organizations to celebrate the centennial of flight. Through these partnerships, NASA celebrated the centennial

and made a lasting impact through its activities, leaving a centennial legacy. NASA supported every major centennial event. It produced both scholarly and public material on NASA activities and flight including books, brochures, posters, articles and wind tunnel tests. Through educational materials, International Space Station downlinks, exhibits and other activities and products, NASA inspired current and future generations to the wonders of flight as well as the contributions of NASA. As the centennial came to an end, a new era of exploration was emerging, with the landing of Spirit and Opportunity on Mars. In a short century, humans have gone from the first tentative steps into the air to setting foot on the moon, routine air travel, a permanent human presence in space on the International Space Station, and the exploration of other worlds. NASA has been a key player in all these advancements over the last century and is working today on what the next century of flight will bring.

Lessons Learned

- Partnerships and collaborations are the best way to expand the limited resources available while increasing the benefit of these activities to the public.
- Formal agreements such as a space act agreement or memorandum of understanding are required before an event or activity to accurately establish the participation of each party.
- A detailed analysis of one time local activities needs to be preformed to provide an accurate picture of final outcomes. In most cases the initial estimates varied greatly from final outcomes.
- Each event requires a single point of contact to work all details and interactions with other parties. As the date grows near and the activities start, confusion can result from multiple people interacting with the outside parties.
- Leverage ongoing activities. NASA's ongoing educational, outreach and history activities were leveraged during 2003 focusing on centennial themes and increasing awareness of the centennial without additional resource requirements.
- NASA's and its predecessor NACA's rich heritage of flight were highlighted providing information on current activities to both NASA employees and the public.

SMITHSONIAN'S NATIONAL AIR AND SPACE MUSEUM

Summary of Event/Program

The Smithsonian's National Air and Space Museum had two primary goals for the centennial of flight year. The first was to open its centennial related exhibition, "The Wright Brothers & The Invention of the Aerial Age," in the museum's building on the National Mall in Washington, D.C., on October 11, 2003. The second and greater undertaking was the opening of the museum's long awaited companion facility, the Steven F. Udvar-Hazy Center, in Chantilly, Va., on December 15, 2003, as part of the centennial week celebrations. Despite a number of serious challenges, both openings occurred on schedule and to much acclaim.

Outcome of Event/Program

Although opening relatively late, "The Wright Brothers & The Invention of the Aerial Age," became one of the key national attractions for the centennial year. While Ohio and North Carolina both have obvious claims to the Wright brothers' story, the Smithsonian's National Air and Space Museum is home to the 1903 Wright Flyer, the seminal artifact in the invention of powered flight. For the exhibition, the Flyer was moved on September 24, 2003, from its central hanging position in the museum's Milestones of Flight gallery into the second floor exhibition gallery where it was put on display at ground level for the first time since it was acquired by the Smithsonian in 1948. The move was open to the media and resulted in, among other coverage, a front page photograph in *The Dayton Daily News*.

The exhibition is made up of more than 170 artifacts on display, many on loan from other organizations around the world. All are intricate pieces to telling the story of the brothers, their method of invention and the cultural impact of powered flight in the decade following Kitty Hawk. It is doubtful that a fuller array of Wright related artifacts has ever been assembled. This added to the universal appeal of the exhibition.

A media breakfast attended by representatives from more than two dozen local, national and international news organizations was held in June to discuss plans for the gallery and a media preview on October 9, 2003, attracted almost three dozen local, national and international news organizations. After the exhibition opened on October 11, media interest in the exhibition continued to grow leading up to December 17, 2003. Curator Peter Jakab conducted 200 interviews related to the centennial and the exhibition during 2003, including featured pieces for NPR, *The New York Times*, *The Washington Post*, ABC News, CBS News, CNN and PBS's News Hour with Jim Lehrer. A satellite media tour organized for the exhibition opening reached nearly 10 million television viewers while a radio media tour organized by National Geographic for the exhibition's companion book was heard by nearly four million people. No surveys were done to determine which visitors to the Smithsonian National Air and Space Museum came specifically for the Wright exhibition, but more than 869,000 people visited the museum from October 2003 through January 2004, and the gallery was consistently one of the most crowded in the building. On the December 17 centennial, curator Peter Jakab gave three well attended special lectures in the Wright gallery. Also on that day, the museum held a book signing and showed NASA TV coverage of centennial events at Kitty Hawk in the Milestones of Flight gallery. More than a dozen news organizations covered the events at the museum on December 17 including CNN, NPR, Reuters and ABC News Radio.

A number of successful educational events were held during the last months of 2003 in conjunction with the exhibition, including a day of live satellite and Internet programming that originated from the gallery and was seen by tens of thousands of students in classrooms across the United States. Hits for the Smithsonian National Air and Space Museum Web site, www.nasm.si.edu, increased steadily for the last months of 2003; there were 19,218,150 hits in October; 21,411,070 hits in November; and 40,694,280 hits in December. In addition, the Smithsonian National Air and Space Museum published a number of books to coincide with the centennial of flight theme.

The public opening of the Steven F. Udvar-Hazy Center was scheduled for December 15, 2003, to celebrate the centennial but to avoid drawing attention away from December 17 events in North Carolina and elsewhere. The Udvar-Hazy Center was already a well known story by December, because of a publicity campaign that began in large part with the groundbreaking ceremony in October 2000, followed by the awarding of the construction contract in April 2001. Media events tied in with construction progress were held in 2002. For 2003, a publicity campaign, part of a communications plan, was designed around at least one media event a month leading up to December. Those events generated local, national and international public familiarization with the center and some of its better known artifacts. The arrival of a retired Air France Concorde in June and the unveiling of the newly reassembled B-29 Enola Gay in August each attracted more than 100 journalists. At all events, there were remarks connecting the Udvar-Hazy Center with the centennial of flight theme. A media preview was held December 5, a tribute to military aviation veterans was held December 9, and the center dedication was held December 11, all leading up to the December 15 public opening. Some 600 media credentials were issued for the month's events. In addition, a satellite media tour was conducted at the center on December 10 with actor John Travolta.

The publicity campaign resulted in a highly successful wave of local, national and international coverage that swelled in the days leading up to the center's opening. Featured print stories and graphics appeared in pieces by *The New York Times*, The Associated Press, *USA Today*, *The Washington Post*, *The Chicago Tribune*, *U.S. News & World Report*, *Smithsonian*, *Washingtonian* and dozens of other major print outlets. The AP story on the December 11 dedication alone ran in several hundred newspapers. Featured broadcast packages about the Udvar-Hazy Center appeared on CNN, NBC's Today show, CBS's Sunday Morning, NPR and Fox News Channel, among 12 national television outlets airing stories and 72 local television stations airing stories in the top 25 markets. In total, it is estimated that more than 70 million viewers were exposed to the Udvar-Hazy Center in December 2003 alone.

The Smithsonian National Air and Space Museum's Steven F. Udvar-Hazy Center attracted 220,000 visitors during the 15 days of December 2003 in which it was open. Sales for the center's museum store, the food service and the IMAX theater were all well above projections and roadways leading to the center were frequent mentions in area traffic reports during the Christmas holiday season. In addition, sales of an annual parking pass had to be suspended when the maximum 2,000 were issued. Approximately 173,000 people visited the center in January. Hits for the Smithsonian National Air and Space Museum Web site, www.nasm.si.edu, increased steadily for the last months of 2003. School tours for the Udvar-Hazy Center began in February 2004, and were heavily scheduled through the end of the academic year. Other educational features and events also were launched in the late winter.

Centennial Legacy

With the opening of "The Wright Brothers & The Invention of the Aerial Age" and the Steven F. Udvar-Hazy Center, the Smithsonian National Air and Space Museum gave visitors two unique outlets for exploring the centennial of flight and to ponder the next century and beyond. While the Wright brothers exhibition will exist for only two years, its themes and unique presentation will no doubt be used well into the future for educational purposes. The public has responded enthusiastically to seeing the 1903 Wright Flyer from a new, close up perspective and there will probably be requests from visitors to keep the airplane at ground level after the exhibit closes. Regardless, the exhibition has brought people closer to the story of the Wrights, their method of discovery and the popular impact of powered flight, allowing the museum to claim unmitigated success with the gallery.

The Steven F. Udvar-Hazy Center is the Smithsonian National Air and Space Museum's permanent tribute to flight's first century and a work-in-progress that will grow in the early years of the second century of flight. The history of the Udvar-Hazy Center will always include mention of its opening during the centennial of flight week. Public and critical reaction in the first months of the center has been overwhelmingly enthusiastic. Together the Udvar-Hazy Center and the museum's building on the Mall can now better tell the story of powered flight with so much more of the national collection available to the public. With two sites, the museum is now the largest Air and Space museum complex in the world. With that comes added responsibility to commemorate, educate and inspire the next generations of flight pioneers.

Lessons Learned

The success in the openings of "The Wright Brothers & The Invention of the Aerial Age" and the Steven F. Udvar-Hazy Center illustrates the importance of advanced planning, effective communications and adherence to deadlines. The timing of the openings gave the public themed destinations in the Washington area that added to the overall quality of the centennial of flight celebrations. The Smithsonian National Air and Space Museum took seriously its role as a Centennial Partner and demonstrated that through unprecedented efforts in focusing (in the

case of the Wright brothers) and expanding its offerings (in the case of the Udvar-Hazy Center) to visitors. The centennial of flight was a unique milestone for the museum and one that will have enduring positive ramifications.

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS (AIAA)

Summary of Event/Program

When AIAA introduced the Evolution of Flight Campaign in 1999, AIAA had aspirations of creating a legacy for flight. AIAA hoped to encourage new talent in the industry and construct an emotional launching pad for the next 100 years of innovation in aviation and space technology. AIAA created a campaign that would reach into the industry, as well as out to the general public.

The Evolution of Flight Campaign included:

- AIAA Wright Flyer Centennial Tour and Exposition
- AIAA/ICAS International Air and Space Symposium
- AIAA Foundation Orville and Wilbur Wright Graduate Awards
- Learn to Fly Scholarships
- Class of 2003 Ambassador Program
- AIAA Distinguished Lecture Series
- Art Contests
- AIAA Section and Student Branch Activities
- Commemorative Publications
- Interactive Web site

Goals and Outcome of the Events and Programs

- A successful AIAA Wright Flyer Centennial Tour and Exposition that reached more than four million people.
- The AIAA/ICAS International Air and Space Symposium in Dayton, Ohio, which celebrated the technological achievements of the last century and laid the groundwork for future technology revolutions, and included 1,300 participants from more than 20 countries.
- The establishment and presentation of the annual AIAA Foundation Orville and Wilbur Wright Graduate Awards.
- Sixty Learn to Fly Scholarships were presented to future pilots and visionaries.
- The Class of 2003 Ambassadors program which enabled students to carry the centennial messages around the world and inspire awareness and interest in the next generation of aerospace leaders.
- AIAA Section and Student Branch activities that inspired members all across the world to celebrate and share the centennial within their own communities.
- A series of commemorative publications covering everything from a chronicle of aerospace to the history of rockets and the early development of modern aerodynamics.
- An interactive Web site that reached more than five million people and enabled them to engage in a host of activities and programs.

Centennial Legacy

AIAA stimulated a new enthusiasm for the next 100 years of aerospace advancement. The campaign showed AIAA and the general public an industry that has much of which to be proud, the least of which is the future. Perhaps that can be the kindle for AIAA's mission to share what AIAA can do with the next generation. The promise of a better, safer, more advanced world lies in the imagination and courage of its children.

Lessons Learned
The American Institute of Aeronautics and Astronautics (AIAA) and all of its partners worked together, early on, to ensure an integrated campaign that would create a legacy for flight, to encourage new talent in the aerospace industry and to construct a launching pad for the next 100 years of innovation in aviation and space technology. AIAA learned that it is essential to the profession to work together to continue the momentum and commitment through various programs and activities.

AVIATION WEEK
Summary of Event/Program
Since 1998, Aviation Week has taken a leadership role to focus the national psyche on the issue of aviation through its Next Century of Flight (NCF) Program. Together with 17 valued industry partners, Aviation Week has connected with more than 19 million people around the world via articles, essays, curriculum and teacher support, and related partner programs.

Goals of Event/Program
The goal has remained constant, to create an excitement about aerospace, and to position aviation for generations to come.

Outcome of Event/Program
Aviation Week's Next Century of Flight program was founded on the very premise of reigniting the passion that the industry was founded upon with the goal of inspiring current and future generations of aerospace professionals. That commitment developed a focus for Aviation Week and its partners to take action on the very workforce development issues outlined in this important document. Some accomplishments included:

- 40 million media impressions to date, reaching 19 million people.
- NCF branded editorial, viewpoints and custom NCF market supplements featuring 21st century aircraft technologies and workforce development issues.
- The re-release of the Papers of Wilbur and Orville Wright, the 2-volume definitive set of the entire writings of the Wright brothers published by McGraw-Hill.
- Reaching thousands of classrooms through McGraw-Hill Education text books and teacher guides.
- The NCF Web site, www.AviationNow.com/Nextcentury, features an extensive archive of all NCF related editorial and exclusive content of 100+ articles, as well as discussion forums, educational resources and partner links.
- The NCF Pavilion, a multimedia, educational outreach component of the program, showcased Aviation Week's proud past and brought together the future at the Paris Air Show, Farnborough Air Show and National Business Aviation Association.
- Dedicated NCF scholarships awarded to students pursuing careers in aviation and aerospace.
- The NCF program produced and participated in three workforce development forums: World Space Congress in Houston, Texas; Aviation Week's Aerospace Expo in Los Angeles, Calif.; Aviation Week's Toulouse Symposium in France.
- Aviation Week's Top 100 Stars of Aerospace, a first ever initiative to identify the most important, most interesting and most influential people in the global aerospace community, past and present. Candidates and those selected as the Top 100 Stars of Aerospace were honored at a gala dinner on June 18, 2003, at the Salle Wagram in Paris, France. Biographies and data are available for future education initiatives.

- NCF Gala on December 17, 2003, at the Smithsonian National Air and Space Museum showcasing Aviation Week's seven technologies that have shaped aviation and space flight as well as future perspectives from visionaries and experts.
- Aviation Week's "NCF Space Imperatives Conference" was created with the goal to garner a new resolve for renewed efforts in support of a new vision and bold initiative to advance human space flight and exploration, reignite public support for America's space program, and fuel public enthusiasm for human space travel and the advent of space tourism.

Centennial Legacy

The impact of the Next Century of Flight included:

- Continuing workforce development editorials in Aviation Week & Space Technology, including the April 26, 2004, report on "Where Aerospace & Defense Professionals Want to Work."
- Workshops and breakout sessions at Aviation Week conferences and events.
- A partnership with McGraw-Hill education.

Lessons Learned

Aviation Week and its NCF partners have taken bold strides over the last decade to launch educational initiatives to help students pursue careers in aviation and aerospace. Aviation Week needs to continue this activity in order to perpetuate the legacy of corporate commitment to community and educational support for young people, particularly in the engineering fields.

FAYETTEVILLE FESTIVAL OF FLIGHT 2003

Summary of Event/Program

From May 16-26, 2003, Festival of Flight in Fayetteville, N.C., presented a series of aviation related events well suited to the city, which claims Pope Air Force Base, Fort Bragg's prestigious 82nd Airborne and some 50,000 military residents to its credit. A general aviation air show and arts festival opened the 11-day celebration, followed by an extensive exposition that featured the past, present and future of aviation. Exhibitors included NASA, the Smithsonian Institution, all branches of the military, the U.S. Space & Rocket Center, AIAA's Evolution of Flight, commercial aviation companies and manufacturers. Each day also included a flyover of a replica 1910, 1911 or 1912 Wright brothers' airplane, as well as demonstrations of moon buggies on a recreated lunar surface. The festival concluded with a thrilling military air show at Pope Air Force Base, Memorial Day ceremonies and a parade.

With an emphasis on education, Festival of Flight also developed a year-long curriculum that culminated with 1,000 students being sponsored each day for exclusive access to the Festival's exposition. Celebrity speakers, hands-on wing construction with Nick Engler and a live satellite link with the International Space Station were among the special programs planned for student audiences.

Goals of Event/Program

Two and a half years in the planning, the Festival of Flight 2003 program met all of its major goals and objectives. The cornerstones of the Festival were honoring the military, since Fayetteville is home to Fort Bragg and Pope Air Force Base, and education.

Outcome of Event/Program
The military was deeply involved with exhibits from the U.S. Army and U.S. Air Force, a two-day military air show featuring the Thunderbirds with a total attendance of 160,000 people, a military heritage banquet on base with 2,500 people, and a Memorial Day parade on Monday, May 26, 2003. It was a great tribute to the U.S. military.

The educational component involved a year-long curriculum of study on aviation history and technology in grades four through 12 in schools throughout North Carolina with NASA playing an important educational role. In addition, it included various aviation related competitions culminating with 1,000 plus students and 150 teachers attending the Aviation Exposition each day. The Exposition, which ran for seven days, was held in four different venues at the Crown Center complex. The exhibit halls were filled with educational, interactive displays for the whole family to enjoy, all honoring the Wright brothers' great achievement 100 years ago.

Other activities centered on the arts, all depicting flight. "The Arts Take Flight" in downtown Fayetteville included an original stage musical called, "Let 'er Fly;" a special showing of the 1927 movie "Wings;" kite flying demonstrations; the dedication of a huge kinetic sculpture, "Stargate 2003;" and music performances by the local Symphony orchestra and the U.S. Army's 82nd Airborne Band. In addition, all the Fayetteville museums had special aviation and aerospace exhibits. On May 18, 2003, a general aviation air show, "Barnstorming at its Best," was held with many of the nation's top aerobatic performers. Poor weather held the crowd down to about 25,000 people. Even though rain throughout the region had a negative impact on projected attendance, the total attendance still reached approximately 300,000 for the 11 days.

Centennial Legacy
There were many long term benefits derived from the Festival including: favorable and positive publicity worldwide for Fayetteville; a strong educational curriculum focused on aviation and aerospace which will continue and grow each year; and several other aspects of the Festival that will have a catalytic effect, in a positive sense, on various community needs (i.e., economic development, downtown revitalization, etc.).

Lessons Learned
The lessons learned included the importance of careful coordination with security regarding entry into events, putting as much important information on the Web site as possible, and making sure operations and public relations people are communicating.

NATIONAL AIR TOUR 2003
Summary of Event/Program
The National Air Tours introduced millions of people to the concept of air travel and led to innovations that literally paved the way for civil and commercial flight. Originally held from 1925 through 1931, the National Air Tours were the premier aviation events of the Golden Age of Aviation. The tours flew more than 29,000 miles visiting 114 cities to promote safe, reliable air travel at a time when flying was considered a daredevil sport. Simultaneously, the tours encouraged aircraft manufacturers to improve their designs and communities to build or improve airports. In the tours' seven year history, more than 600 aircraft participated, representing the latest in aircraft design and technology.

Leading innovators of the day joined efforts with the Detroit Board of Commerce to promote civil and commercial aviation through the National Air Tours. Notable names among the group

included Charles Lindbergh, Orville Wright, Jimmy Doolittle, Walter Beech, Eddie Stinson, Harold Pitcairn and William Stout.

The National Air Tours were commonly referred to as the Ford Air Tours. Henry Ford and his son, Edsel Ford, lent their trusted name in transportation to the endeavor through sponsorship and active participation. Edsel Ford supplied a magnificent three-foot tall sterling silver trophy to demonstrate support for an industry that had similar potential to that of the automobile industry.

With the year 2003 marking a century of powered flight and the 100th anniversary of Ford Motor Company, the Aviation Foundation of America, a Minneapolis-based nonprofit organization, seized the opportunity to share the story of the Golden Age of Aviation by producing and promoting what would have been the 1932 National Air Tour. The '32 tour was canceled due to hardships from the Great Depression.

During 17 days in September 2003, there were 80 volunteer pilots and crew that flew more than 25 rare airplanes from the 1920s and 1930s on the National Air Tour 2003, bringing living history to 26 cities, crowds of thousands and an audience of millions. These modern day aviators, sitting behind antique radial engines and wooden propellers, overcame skeptics' doubts and weather related issues to successfully complete the tour. The first aircraft finished the 4,000 mile journey nearly 15 minutes ahead of a schedule that was laid down more than a year before and was based on a route planned 71 years earlier.

The story of the National Air Tour 2003 reached millions of people. Program components enabled a global community to join in this celebration of the centennial of flight. These program components included:

- **A Flying Museum and Classroom**
  The tour consisted of more than two dozen, rare and often one-of-a-kind airplanes from the 20's and 30's traveling to 26 cities without charging an admission fee of any kind. Many aircraft were taken out of museums or had just undergone extensive restorations. Examples of participating aircraft included: one of two flying Ford Tri-motors in the world (the second went part way); the only flying Sikorsky S-39 and S-38 flying boats in the world; American Airline's oldest surviving airliner, a Stinson Tri-motor; two of six flying Stearman Speedmails in the world; the only flying Fokker aircraft in the world, the Fokker Super Universal from Alberta, Calgary; the only flying Ryan M-1, similar to the aircraft Charles Lindbergh flew solo across the Atlantic in 1927; and a WACO ASO biplane painted in the same livery in which John Livingston won the 1929 National Air Tour.
- **The Tour's Legacy**
  Participation from the FAA's venerable DC-3, N34, represented the FAA's integral, 77-year role in operating the safest, most efficient airspace in the world. The aircraft is painted in the colors of the Civil Aeronautics Administration (a predecessor to the FAA) and is outfitted just as it was when it was one of 60 DC-3s in the agency's flight inspection fleet. This aircraft is on the national register of historic places and citizens were invited to tour the aircraft at each stop.
- **Experiencing Flight in a Golden Age Aircraft**
  Two groups of tour pilots barnstormed rides for a nominal fee bringing two New Standard biplanes and a beautiful 1929 Travel Air E-4000. These rare aircraft allowed the public to experience the thrill of flight in an open cockpit biplane and get a taste of the experience of a Golden Age aviator.

- **Pilots Educating the Public**
  In addition to official tour announcers using a public address system, tour pilots and crew personally interacted with the public at each stop, educating them about airplanes, the National Air Tours, the Golden Age of Aviation and the centennial of flight. Citizens were allowed to touch and feel the airplanes and even enter the cockpits of the aircraft at each stop, all while original National Air Tour music played in the background. Except for aircraft movements and fueling, no fences were allowed to hold back the crowds. Community groups and airport boosters often supplied meals and city mayors commonly proclaimed the tour's arrival date as "National Air Tour Day." Schoolchildren followed the tour over the Internet. Many of these schoolchildren visited the tour at its various stops.
- **Homage to the Site of the First Flight**
  National Air Tour aircraft circled the Wright Brothers National Memorial on the day the tour had intended to land at the monument. Landing restrictions were in place due to Hurricane Isabel.
- **Online Audience**
  A comprehensive Web site, www.NationalAirTour.org, featured daily updates from the tour, the ability to follow the aircraft in real time over the Internet, tour history information and a complete media center with downloadable text, images and videos of the original tours.
- **Publishing for the Masses**
  Three books concerning the original National Air Tours ("The Ford Air Tours 1925-1931," "One, Two" and "A Four-Thousand Mile Journey") were available for students, teachers and others to read and download free of charge at www.NationalAirTour.org.
- **Public Relations**
  An extensive public relations program reached local, trade, national and international media.
- **The Legacy of Innovation**
  Participation from top names in aviation, included Erik Lindbergh, Stephen Wright, William Thaden (son of famous aviatrix, Louise Thaden) and the tour's honorary chairperson, Edsel B. Ford II.
- **Documenting the Past**
  An hour-long documentary was produced and broadcast on numerous PBS stations. "America Takes Flight" highlighted the seven-year history of the original National Air Tours with original footage, music and interviews.
- **Educating a New Generation**
  Community relations packets included sample proclamations and customized posters that could be used to educate chambers of commerce, airport managers and other key audiences along the 2003 route.
- **Building Excitement**
  Booths and pre-tour antique aircraft were displayed at EAA AirVenture 2003 in Oshkosh, Wis., and Sun 'n Fun 2003 in Lakeland, Fla. Tour participants often lectured to community groups about the history of the National Air Tours and the 2003 flight re-creation.
- **A Piece of History**
  Memorabilia and merchandise gave citizens a chance to take home a slice of the National Air Tour 2003 with books, caps, T-shirts and posters based on commissioned artwork.

Goals of Event/Program

The goals of the program were to:

- Increase awareness of and educate citizens about the contributions made to aviation during the Golden Age of Aviation as the nation celebrated the centennial of flight.

- Share a flying museum of rare and one of a kind aircraft from the '20s and '30s with citizens across the United States without charging an admission fee. Many of these citizens may not have been able to participate in other centennial of flight celebrations.
- Celebrate Ford Motor Company's 100th anniversary by increasing awareness of Edsel and Henry Ford's extensive contributions to aviation, including their support of the original National Air Tours.

Outcome of Event/Program

The National Air Tour 2003 was a resounding success. It was the first time in more than seven decades that anything of the sort had taken place. There was not even a single Band-Aid needed along the route.

The National Air Tour 2003 generated more than 100 million gross media impressions through advance story placements, interviews and event coverage from international, national, local and trade media. Ninety-five percent of all stories carried the tour's key messages and tour organizers estimate 80 percent of story placements carried a centennial of flight message.

Sample media placements included: *USA Today*; Public Radio International's "Savvy Traveler;" CBS News Radio; Associated Press; FOX News Channel; Discovery Wings Channel; *Flying* Magazine; and *Air & Space*. International audiences were able to read about the National Air Tour 2003 in Japan's *Koku-Fan*, Germany's *Aerokurier,* New Zealand's *Classic Wings* and Great Britain's *Aeroplane Monthly,* to name just a few. The tour was given top placement on the front pages of local dailies along the route and almost every television station in each market covered the tour's arrival when not covering Hurricane Isabel.

Key aviation writers from *Flying* Magazine, *Private Pilot*, *Air & Space* and more than a dozen other freelancers and journalists from around the world flew on legs of the tour.

The "America Takes Flight" documentary aired on PBS stations across the country and continues to be sold throughout the world.

The National Air Tour 2003 Web site became a powerful communications tool with 14.5 million Web hits and more than 450,000 individual visits to the tour site.

Web page surfers visited the "daily updates from the tour" pages more than 75,000 times, and more than 5,000 people requested that daily tour updates be sent directly to them via e-mail. In addition, a live, online flight tracking service of air tour ships from www.flightexplorer.com was visited by thousands of people each day during the tour.

More than 75,000 people came out to witness the tour despite daytime arrivals that conflicted with work and school schedules, flight delays due to storm fronts and Hurricane Isabel, and often short stays at airports. Many more witnessed the ships flying overhead. As an example, in Tyler, Texas, a crowd estimated at more that 2,000 gathered at the Tyler airport just to see the ships fly over head. Aviation enthusiasts, families and general spectators learned about the Golden Age of Aviation by experiencing the sights and sounds of an antique airplane tour of a magnitude that will likely never happen again.

Barnstorming tour pilots estimated that more than 1,800 people experienced flight in an open cockpit biplane during the tour.

More than 1.5 million people attended the top aviation events such as EAA AirVenture and Sun 'n Fun where the tour had booths and aircraft displays.

Edsel B. Ford II agreed to be the tour's honorary chairperson. On behalf of the Ford family, Edsel B. Ford II presented Greg Herrick of the Aviation Foundation of America with the "Spirit of Ford" award at the send-off ceremony. It was the first time the award had been presented to someone outside of the automobile industry.

Based on the success of the National Air Tour 2003, the Aviation Foundation of America has been contacted by other organizations and individuals who are planning state and regional air tours. The National Air Tour renewed interest in the nation's aviation heritage. Time and time again, tour participants were told things such as, "This is the largest crowd we have ever had at this airport."

Centennial Legacy

The National Air Tour 2003 educated an audience of millions about America's aviation legacy from the Golden Age and raised awareness of the centennial of flight. The tour broke through the boundaries of the closely knit aviation community and ignited interest in aerial pursuits with citizens who might not normally venture out to an airport.

The National Air Tour 2003 enabled the public, pilots, crew and Web site visitors to gain insight into an endeavor that had not taken place for nearly 75 years. Citizens were able to see rare birds filling the skies and inquire about their tube and fabric skins, wooden propellers and colorful paint schemes. Crowds experienced the prop wash from more than 30 radial engines preparing to taxi and take off. Online audiences shared the excitement of a flying museum and the struggles of battling uncooperative weather with a group of airplanes nearly three quarters of a century old, flying under visual flight rules.

Experiences of a bygone era were relived and people were reminded of the nation's aviation legacy in preparation for the next century of powered flight.

Lessons Learned

Flying a 4,000 mile route for what would have been the 1932 National Air Tour in an antique airplane brings with it all the challenges faced by the original tour pilots and crew. For 17 days in September, The National Air Tour 2003 was able to trace the footsteps of the pioneers of the Golden Age, dealing with all the issues they dealt with, weather, maintenance and even the logistics of inviting crowds out to witness the tour's arrival. The experience brought greater admiration for one of the first flying generations and is a reminder of the hard work and struggles encountered by those pushing the boundaries of any art or science.

The National Air Tour 2003 literally took the history of America's Golden Age of Aviation directly to the people. This living museum and classroom flew to their hometowns, enabling thousands to learn and experience aviation history first hand. As a result, the experience brought many visitors and participants to tears.

Finally, the celebration of the centennial of flight has notably increased awareness of aviation in the United States. Yet, there is still much work to be done to remind citizens of the wonderful benefits that aviation brings. As Newton may have observed were he alive today, if people have flown higher, it is because they are flying from the shoulders of giants.

ROCKEFELLER CENTER
Summary of Event/Program
From July 29-August 18, 2003, Rockefeller Center hosted New York City's marquee event in celebration of the 100 year anniversary of Orville and Wilbur Wright's ascent into history. GE Presents Centennial of Flight at Rockefeller Center chronicled the accomplishments of the Wrights and delivered a retrospective exhibition of the last century of aviation accomplishments.

Rockefeller Center coordinated many illustrious organizations, national agencies and private groups to develop a museum quality exhibit installed throughout the entire Rockefeller Center complex. The curatorial vision encompassed the famous Rockefeller Plaza streets, the underground concourse, artwork in landmark buildings, the elegant Channel Gardens and the air above.

Artifacts on display included a flyable replica of a 1903 Wright Flyer, Tuskegee Airman Roscoe Brown's P-51 Mustang, an U.S. Air Force F-16 Fighting Falcon, a replica of NASA's first Redstone Rocket, an Apollo Command Module, a U.S. Marine Corps Harrier Jet, concept space planes, along with engineless space travel, interactive flight simulators and the GE-90, the largest, most powerful jet engine ever built.

There was an opening night reception in the Channel Gardens attended by more than 800 guests. The evening was a glorious tribute to the Wright brothers and the living heroes of aviation. Guests included astronauts Dr. Neil Armstrong and Dr. Buzz Aldrin, Amanda Wright Lane, NBC Chairman Bob Wright, current astronaut Ken Bowersox, Gen. J.R. Dailey and many of the key members of the commercial flight industry. WNBC News Anchor Maurice Dubrois emceed the evening program as Patti LaBelle sang the NASA commissioned song "Way Up There." World War II pilot and music legend Skitch Henderson brought down the house with a swing era compilation belted out by the "Legends of Jazz" band.

Goals of Event/Program
The larger-than-life installation paid tribute to the heroes and icons of aviation, the machines and the people that make them work. The three-week exhibition was designed to educate New Yorkers and visitors to Rockefeller Center, and most importantly, to inspire America's next generation of aviation pioneers.

Outcome of Event/Program
Extensive outreach in the community and media interest garnered more than 2.8 million visitors to Rockefeller Center and 58 million media impressions during the three-week celebration. Ongoing children's activities and educational programming were produced throughout the three weeks. The programs and content of the exhibition were showcased almost daily on America's top-rated morning news show, The Today Show. There were six segments on The Today Show featuring Mars rovers, U.S. Air Force falcons, the great grand niece of the Wright brothers, a GE Engine specialist and more.

SPACE DAY FOUNDATION
Summary of Event/Program
Space Day 2003, the annual tribute to space exploration, invited young people of all ages to honor the previous 100 years of aviation accomplishments while celebrating "The Future of Flight" on May 1, 2003. Established in 1997, Space Day has exploded into a global celebration with events taking place in all 50 states, across Canada and in 15 other countries. On Space Day, millions of youngsters, students, teachers and space enthusiasts were engaged in

activities at schools, libraries, science centers, museums and planetariums throughout North America. NASA is one of more than 75 national Partner and Associate organizations that support this award winning educational initiative. Canadian Prime Minister Jean Chretien proclaimed May 1 as Space Day in his country with special activities planned in provinces throughout Canada. The national Space Day celebration was held in Washington, D.C., at the Smithsonian's National Air and Space Museum. The opening ceremony featured a number of dignitaries including: Sen. John Glenn; Gen. J.R. Dailey (U.S.M.C., Retired), Director of the Museum and Chairperson, U.S. Centennial of Flight Commission; NASA Administrator Sean O'Keefe; Anna McGowan, Manager of NASA's Morphing Program, Langley Research Center; as well as two teen spokespersons, Bianca Baker, a reporter for NASA's SCIence Files and Anne Breaks, an aspiring astronaut from Canada. Sen. John Glenn recognized 17 "Stellar" Design Challenges student teams from across the country.

Goals of Event/Program

Designed to spark interest in science, technology, engineering and math, Space Day seeks to inspire the next generation of inventors, aviators and explorers. "We hope to perpetuate the legacy of our space pioneers by nurturing that same sense of curiosity in our children, engaging them in the thrill of discovery," said Sen. John Glenn, co-chair of Space Day. "These young people represent our future and will one day realize exciting possibilities that we can now only imagine." The Space Day initiative, which is supported by the nonprofit Space Day Foundation, is dedicated to the advancement of science, technology, engineering and math by inspiring young people to realize the vision of space pioneers.

Outcome of Event/Program

Space Day events and activities were held in all 50 states, across Canada and in 15 other countries. Forty-seven governors and the Prime Minister of Canada officially proclaimed Space Day as well.

U.S. AIR FORCE CENTENNIAL OF FLIGHT OFFICE

Summary of Event/Program

Established in January 2001, the Centennial of Flight Office (CVAH) reports to the Assistant Vice Chief of Staff of the U.S. Air Force (USAF/CVA). The U.S. Air Force Centennial of Flight Office participated in a wide range of events and products during the Centennial year. The list below is a broad sample of the more than 50 Centennial events in which the U.S. Air Force was the primary sponsor or national Centennial of Flight Partner supporter.

- **Women in Military Services for America (WIMSA)**
  In coordination with WIMSA and Art-Reach International, the U.S. Air Force premiered a documentary honoring women in both military and civilian aviation. The film premiere was held on March 10, 2003, at the WIMSA Memorial located in Arlington National Cemetery to commemorate the centennial of flight, Women's History Month and women in U.S. Air Force aviation. CVAH organized, managed and executed the event. More than 300 guests attended the event, including several senior members of the military, Chief of Staff Gen. Jumper and Vice Admiral Thomas Barrett of the Coast Guard. The film premiere was showcased and promoted on the Fox Channel 5 evening news.
- **Randolph Freedom Flyer**
  The 12th Flying Training Wing at Randolph Air Force Base conducted "Tattoo '03: A Century of Progress – Celebrating 100 Years of Powered Flight," at the Verizon Amphitheater in Selma, Texas, on March 27, 2003. The Tattoo ceremony continues a historic military tradition. This Tattoo focused on the centennial of flight and recognized the

30th anniversary of the repatriation of POWs from Vietnam. This event was free of charge and open to the public. Maximum seating at the Verizon Amphitheater is 20,000, however more than 1.2 million civilian and military people were able to witness this event through extensive local media coverage. The event featured a musical performance by the Air Education Training Command Band together with the U.S. Air Force Tops in Blue Performance Team, along with flyovers of 47 active vintage aircraft.

- **The Aviation Art Exhibit**
  A three-week exhibit that highlighted the U.S. Air Force's Art Collection from May 19-June 9, 2003, was held at Union Station in Washington, D.C. This event was open to the public and displayed artwork owned by the Federal government which had never been publicly viewed. In addition to the rare artwork, several activities were held in conjunction with the exhibit. Local area schools visited Union Station on field trips to receive guided tours and participate in hands on activities. Select artists were featured during the event and were on site to sign prints and speak about their work. The exhibit concluded with a black tie gala hosted by the Air Force Association with representation from senior U.S. Air Force leaders, industry and Congress. The event was a tremendous success; nearly 70,000 patrons passed the exhibit each day.
- **Rockefeller Center's Centennial of Flight Expo**
  Rockefeller Center's Centennial of Flight Expo was a three-week exhibit from July 29-August 18, 2003, that highlighted the historical, political and social growth of aviation, beginning with the miraculous first flight and leading up to the most current awe-inspiring discoveries of the day. The U.S. Air Force was a prominent exhibitor along with NASA, FAA, GE and the Intrepid Museum. The U.S. Air Force provided stationary and interactive exhibits, static aircraft and maintainers, video footage, band and drill team performances, speakers, and Special Operations demonstrations. Rockefeller Center's Centennial of Flight Expo was an exhibit in downtown Manhattan enabling hundreds of thousands of visitors the opportunity to pass through. Special exhibits were created solely for the purpose of this event. During the three-week exhibit, the U.S. Air Force gave away 20,000 "Celebrating a Century of Flight" brochures, 9,000 other brochures, 15,000 stickers, 10,000 pins, 500 U.S. Air Force history pamphlets and 500 patches.
- **International Broadcasts**
  While in New York for the Rockefeller Center's Centennial of Flight Expo, the U.S. Air Force promoted the centennial year by being a part of several international broadcasts. Most notably, Chief of Staff Gen. Jumper and Secretary of the Air Force, Dr. Roche, were interviewed on The Today Show and famed Candy Bomber, Colonel (retired) Gayle Halvorsen, rang the opening bell for the NASDAQ Market site. Other national and international media opportunities included CNNfn interviewing Colonel (retired) Halvorsen, Telemundo, The Today Show and Russian TV interviewing an U.S. Air Force security canine unit, and Korean TV interviewing an U.S. Air Force pilot about U.S. Air Force capabilities.
- **The Global Air Chiefs 2003 Conference (GACC 2003)**
  The Global Air Chiefs 2003 Conference was held in conjunction with the Air Force Association's Annual Convention. This was the second time in the history of the U.S. Air Force that a conference of this magnitude was organized. GACC 2003 was held from September 14-21, 2003, at the Marriott Wardman Park Hotel in Washington, D.C. Chief of Staff Gen. Jumper served as host to 89 of his military aviation counterparts from around the world. The mission of the conference was to strengthen worldwide aviation relationships and to jointly commemorate the centennial of flight.

- **CDs and DVDs**
  CVAH is currently distributing CDs and DVDs of the U.S. Air Force Band developed and produced Broadway style show, "Born of a Dream," that was presented at the National Theater in Washington, D.C. The visiting Air Chiefs attended the premiere of the show.
- **The Centennial Gathering of Eagles**
  The Centennial Gathering of Eagles and Southern California Aviation Tour was a three-day event from November 20-22, 2003, in Los Angeles, Calif. One hundred "Eagles" were honored at this event. To recognize the personal contributions of each Eagle, the U.S. Air Force paid special tribute to the nation's air and space leaders and legends during a ceremony at the Kodak Theatre. Additionally, two free of charge public performances of the U.S. Air Force Band's "Born of A Dream" were held.
- **Southern California Aviation Tour**
  To recognize Southern California's contributions to aviation development, invitations were distributed to civic leaders in the Los Angeles community to attend a Southern California Aviation Tour. These distinguished guests were shuttled to the Boeing Facility in Long Beach where they toured the grounds and viewed static aircraft. They were provided a unique experience flying in a C-17 aircraft to Edwards Air Force Base where they were able to view more static aircraft and witness an air show that featured, for one of the first times, the new F/A-22. Media on hand for the events included: *Long Beach Press Telegram*, *Orange County Register*, *Antelope Valley Press, Los Angeles Daily News*, Warner Brothers, Gemma Productions and KABC Channel 7.
- **U.S. Air Force Publications**
  U.S. Air Force publications included: a pamphlet series by Dr. Meillinger; Heritage Flight Book; the international award winning Charles Lindbergh video; Centennial Lithographs; U.S. Air Force news products; centennial pins; centennial stickers; centennial bears (Wright Stuff); U.S. Air Force centennial event pamphlet (Tri-Fold); U.S. Air Force seatback magazine; U.S. Air Force Demo Team trading cards; and the U.S. Air Force Centennial PSA. Items were distributed to a diverse group: U.S. Air Force offices; Pentagon offices; aviation event organizers; Space Day coordinators; other government offices; schools; teachers; home schooled students; and individual aviation enthusiasts. For the centennial year, December 2002 through December 2003, more than 790,000 magazines, posters, pamphlets, patches, pins, stickers, timelines, education curriculum and U.S. Air Force brochures have been mailed or brought to aviation exhibits throughout the country. In addition, Student Aware distributed 41,612 education packages throughout their national high school network.
- **Web Site**
  Part of the U.S. Air Force's communication outreach was to use a Web site to relay up to date information on a variety of areas and programs relating to the centennial. The official U.S. Air Force Centennial Web site was www.centennialofflight.af.mil. The U.S. Air Force Centennial of Flight Web site will still be available as a resource for educators and aviation enthusiasts after the centennial year. Air Force News (AFNEWS) will host the Web site in the future.
- **Tournament of Roses Parade**
  In tribute to the 100th anniversary of powered flight, an U.S. Air Force F-117 and B-2 led the 114th Tournament of Roses Parade with a flyover on January 1, 2003, in Pasadena, Calif. The public was invited to talk with aircrew members, enjoy the new interactive exhibit, Cross Into the Blue, and the Air Force pop band, Galaxy, performed. The Air Force Total Force Band led the Rose Parade down the streets of Pasadena while U.S. Air Force Recruiting Service personnel acted as escorts for the Rose Court. In addition, the U.S. Air Force had a second flyover at the Rose Bowl and the Secretary and Chief of Staff of the U.S. Air Force

were highlighted on the Jumbotron between quarters. Media coverage that highlighted the U.S. Air Force's contribution to the Tournament of Rose Parade included ABC, Access Hollywood, KTLA Channel 7 and Univision.

- **The U.S. Air Force Pilots for Wright Flyer Program**
  The U.S. Air Force Pilots for Wright Flyer program was an opportunity to train four U.S. Air Force pilots to fly a replica Wright Military Flyer that the Wright Brothers Aeroplane Company was constructing for the centennial year. With four "retrained" pilots, the U.S. Air Force was able to incorporate a Military Flyer in many of the media and public awareness events planned for 2003. Their struggles to learn to fly the Wright brothers' invention were documented by the History Channel, Discovery/Wings and The Today Show.
- **NASCAR Coca-Cola 600**
  On May 25, 2003, the U.S. Air Force participated in many aspects of the NASCAR Coca-Cola 600. A pre-race flyover was orchestrated to include a B-2 and the U.S. Air Force Thunderbirds. U.S. Air Force Recruiting Stations, Cross Into the Blue and Raptor were on the track outskirts which allowed the general public great access. There were many media opportunities with various local and national media for U.S. Air Force senior leadership such as: SpeedVision, Performance Racing Network, XM Radio and SCS Media. Additionally, the televised race had many great shots of the U.S. Air Force Centennial themed #21 racecar. During the pre-race show on Fox, the U.S. Air Force promoted 2003 as the centennial year.
- **Documentaries**
  The History Channel volunteered to produce a few short documentaries for U.S. Air Force use during the centennial year and beyond. They produced three approximately 10-minute videos. Topics covered included The Tuskegee Airmen, Stealth Technology and The Early Years of Flight. These videos were used at many speaking engagements, exhibits and as background images at major events. The first location to use the videos was Rockefeller Center.

Goals of Event/Program

The U.S. Air Force Centennial of Flight Office was formed to research, plan and coordinate the U.S. Air Force's participation in the worldwide centennial of flight celebration and coordinate resources with government, military and local communities. Throughout 2003, the U.S. Air Force Centennial of Flight Office participated in numerous events and programs to achieve one or more of its four primary objectives: increase positive public awareness of the U.S. Air Force mission, lay the foundation to support recruiting efforts in both the near and long term, enhance retention of U.S. Air Force people, and strengthen relationships within the worldwide aviation community.

Outcome of Event/Program

Because of the national magnitude of the centennial year, the U.S. Air Force was able to develop programs that could reach a broad market. It is estimated that by attending and assisting more than 50 centennial themed events nationwide that the U.S. Air Force made a lasting impression on more than 50 million people.

Centennial Legacy

The legacy of the U.S. Air Force Centennial of Flight Office is far reaching. Efforts were successful to promote the U.S. Air Force's contribution to aviation and inspire the next generation to pursue career fields in aviation.

Lessons Learned
A separate U.S. Air Force office was essential to ensure this level of participation during the centennial year. The U.S. Air Force was a proud supporter of the U.S. Centennial of Flight Commission and its Partners.

LIBRARY OF CONGRESS
Summary of Event/Program
On October 4, 2003, the Library of Congress opened "The Dream of Flight" exhibition in the Thomas Jefferson Building to commemorate the Wrights' achievement and to celebrate the centennial anniversary of this great event. Mounted as a special presentation within its American Treasures Gallery, the exhibit draws upon the Library's Wilbur and Orville Wright Collections to document their achievement and uses some of the Library's rarest and most significant materials to explore the notion that flight has occupied a central place in most cultures. The exhibit will close April 24, 2004, and is available in a digital version.

As a separate project, the Library also made a significant portion of the Wilbur and Orville Wright Papers available to the public online. Spanning the years 1881 to 1952, the online presentation of more than 10,000 items includes their correspondence, diaries and notebooks, photographs, and other documents, as well as their letters to aviation pioneer Octave Chanute.

Goals of Event/Program
The goal of the Library's exhibition was to make available the most significant and interesting Wright materials to those who visit and to thereby impress upon the public that the Wrights were not simply lucky, hit or miss inventors, but were instead a dedicated, visionary, courageous pair who acquired an understanding of the scientific problem of flight.

The goal of the digitized papers project was to offer the public access to the most important Wright documents as part of the Library's overall mission to make its resources available and useful to Congress and the American people.

Both the exhibition and the online papers project have been well received and well attended.

Outcome of Event/Program
Since the Wright exhibition is a special presentation that is located physically within a permanent, rotating American Treasures exhibition, it is not possible to determine which visitors came solely for "The Dream of Flight" material. However, more than 35,000 individuals attended the American Treasures exhibition during the October-December 2003 period.

Traffic for the Wright Papers Web page, which went online in early October 2003, totaled some 325,000 hits (number of times accessed) through January 2004.

Centennial Legacy
As custodian of the Wright Papers, the Library sought to make these significant primary materials available to the greatest number and to raise the public's consciousness and knowledge about the Wrights and their signal achievement.

ARIZONA WING OF THE COMMEMORATIVE AIR FORCE

Summary of Event/Program

The Arizona Wing's Second Annual Veteran's Day Fly In and the Arizona Centennial of Flight Exhibition afforded the Arizona Wing the opportunity to reach out to the community in a unique way. First, a two-day festival of flight spotlighted not only Wing aircraft, but warbirds and other visiting aircraft that participated in the event; and second, a more sustained two-month celebration of flight exhibition was presented. The fly in included aerial demonstrations to round out the festivities, together with an exhibitors' hall which included a wide variety of participants, including the military, model builders, public education, collectors of memorabilia, art, literature, historic groups and others connected to the Arizona Aviation Community. Topping off the fly in was a special inauguration ceremony on Saturday morning, November 8, 2003, at which a Governor's Proclamation recognizing the Arizona Wing and its role in the centennial of flight was presented. After an opening ceremony, presentations of the Proclamation and remarks by public officials, a flight of F-16 Falcons from neighboring Luke Air Force Base flew over the Museum and the festivities, adding a significant sense of drama and excitement to the fly in.

The exhibition was a collaborative effort among the participating exhibitors to educate visitors about how central aviation is in their lives and the role Arizona played and plays in the development of powered flight. Exhibitors presented a broad array of perspectives on aviation, including: the impact it has had on the state's economy; its historic significance in terms of the state's development and contribution to the nation's security and wellbeing; the beauty and wonder of aviation (through photographic and art galleries); unique innovations in lighter than air craft; the role women and minorities played in aviation; and aspects of flight that everyone, whether they pilot a plane or not, can participate in, such as computer-based flight simulation and model kit building.

Both events proved a resounding success. The fly in drew more than 15,000 visitors in its two-day run, doubling last year's attendance, and providing the Arizona Wing with the opportunity to introduce itself to a broader sampling of the community. Visitor attendance at the Wing Museum since the event has noticeably increased, believed in part to stem from public awareness of the Arizona Wing's resources thanks to the fly in. The exhibition's attendance topped 3,000 visitors.

Goals of the Event/Program

The goals of the Arizona Wing center on its restoration and stewardship of aircraft assigned to it by the Headquarters of the Commemorative Air Force in Midland, Texas. However, in a sense, the restoration and preservation of historic aircraft is but the tip of the iceberg for the Arizona Wing. The Arizona Wing's aircraft, including the B-17 Flying Fortress Sentimental Journey, a B-25 Mitchell Bomber (currently in final stages of restoration), L-Bird Utility Aircraft, a Beech C-45 Expeditor, Grumman Guardian and a North American T-6 Trainer (in Navy SNJ livery), are a major draw that enables the Arizona Wing to tell the much bigger story of aviation centered on the culture and lives of the people who flew and crewed these and other aircraft. Over the past year or so, the Arizona Wing has broadened its vision to look beyond the years of World War II to later periods as well. In addition, the opportunity to anchor the exhibition in Phoenix has allowed the Arizona Wing to partner with others in the community to broaden the breadth of the displays to include the early days of flight leading up to the conflict that began in 1914 in Europe in which the airplane emerged as the ultimate weapon.

Through the aircraft, displays of memorabilia, oral histories, models and descriptive materials on display in the Museum, the Arizona Wing aims to provide the visitor with a fully rounded and complete understanding of the meaning of flight, including the technical, historical and human

aspects. The fly in allows history to come alive by adding the dimension of reality to that which is exhibited in the Museum.

It is the Arizona Wing's experience and belief that present generations are missing the opportunity to appreciate the wonder of flight in the context of American history. The Arizona Wing believes their efforts extend to the public in general an enjoyable, unique, valuable and unforgettable experience.

Attendance at both the fly in and the exhibition attest that the Arizona Wing succeeded in surpassing the goals. Feedback from those in attendance indicates that the event was worthwhile and enjoyable and that visitors will come again next year.

The Arizona Wing's native territory had traditionally centered on the period 1939 through 1945. The exhibition afforded the Wing the opportunity to reach out beyond this period to celebrate achievements. Because resources were limited, the perfect solution was to solicit teammates each of whom could provide its own unique perspective about the centennial, specifically how it related to Arizona. The goal was very simple: create a venue for celebration; make long-lasting friendships with others that share a passion for aviation; and, above all, use these resources and alliances to educate the public at large about aviation in general, the meaning of the centennial and the role Arizona played in the evolution of powered flight.

Outcome of Event/Program

For the fly in:

- Both television and print media amply covered the fly in by promoting it as a "thing to do this weekend" and that had a positive effect on participation.
- Event attendance more than doubled over last year's effort – from 7,000 to more than 15,000 attendees.
- Positive feedback came via many of the exhibitors who participated in the event. It was considered a popular venue for exhibitors and some have commented on an upswing in interest in their respective areas.
- It is believed that a higher awareness of the Museum and its value in the community also resulted from the event. There has been a noticeable upturn in attendance at the Museum. This has sparked thinking and planning for alternative ways to export these messages to the community.

For the exhibition:

- Event attendance topped 3,000 in the two months of its run. This included a Veteran's Group, several school tours and many out-of-town visitors. A guest log reflects very favorable reaction from visitors.
- The Arizona Wing did not start with a Web page, but one was developed early in the event's run, thanks to the good offices of a partner in the effort, Mesa Public Schools. The site remains open and can be accessed at www.mpsaz.org/fltcntr.
- To the Arizona Wing, the most important outcome of the exhibition was the friends that were made along the way. The gratifying consideration was that the Arizona Wing only started with a small cadre of participants, but the word got around until the exhibition had blossomed in size, such that the exhibition space was actually getting crammed. No one who offered to participate was turned down.
- Each of the exhibitors supplied its own printed materials supporting its offerings. The Arizona Wing was pleased to have the support of the U.S. Centennial of Flight Commission and the U.S. Air Force's Centennial of Flight Office in providing a broad array of materials of

general appeal on the centennial that further supplemented the visitor's experience. The Arizona Wing also created a scavenger hunt with questions that helped visitors understand the nuances of the exhibits. It was also a great way to focus the younger visitors and keep their attention. Answer keys were provided to parents.

- Through the leadership of the Craig Hewitt Chapter of the International Plastic Modelers Society (IPMS), the exhibition was also able to provide several "make-and-take" events during which children could take a plastic model aircraft and build it under the direction of an IPMS member. This was always satisfying because the children were able to leave with something tangible and received useful lessons in model building and the structure of aircraft. The classic kit provided was that of an F-18 Hornet in Blue Angels livery.

Centennial Legacy

The Phoenix Metropolitan Area has substantially weakened in terms of events spotlighting aviation. Airshows formerly presented in Scottsdale and Chandler, Ariz., are no longer offered. Moreover, the Champlin Fighter Museum, considered to be the world's foremost collection of fighter aircraft, has transitioned to Seattle as a unit of the Museum of Flight. Accordingly, the market begs for events grounded in aircraft and that provides the Arizona Wing the perfect opportunity to outreach its Museum through a fly in.

Given this backdrop, the centennial legacy afforded by the event was clear. At the fly in, the perfect time to think about and touch aircraft, the Arizona Wing's aircraft and associated exhibits touched more than 15,000 people. The fly in also afforded the Arizona Wing the opportunity to promote its companion event, the Arizona Centennial of Flight Exhibition, which complemented the fly in, not just in terms of a longer runtime, but with emerging features and exhibits that were destined to join the Museum, and have since become features on exhibit.

Both events, coupled with the Arizona Wing's relationship with the U.S. Centennial of Flight Commission under the 2003 Memorandum of Agreement, have afforded the Arizona Wing the opportunity to retool its focus on aviation and provide a more sustained, balanced and valuable experience to visitors.

The opportunity to present the Exhibition has afforded the Arizona Wing invaluable visibility in the community, both among sister museums, aviation groups and enthusiasts, and the general public. It allows the Arizona Wing to remind the community that a quality aviation museum and experience exists in the Phoenix Metropolitan Area. This allows the Arizona Wing the opportunity to promote the legacy of aviation more efficiently. Moreover, they are now positioned to present exhibits to the public dealing with aviation subjects outside the core period. Witness the opening of the Early Flight Exhibit in February, in cooperation with Arizona Model Aircrafters, one of the exhibitors at the exhibition. This redirection has catapulted the Docent Program by providing new areas of information for study and presentation to the public, as each docent is challenged to become more of an authority on early flight, the watershed of the centennial legacy.

Lessons Learned

The annual fly in has strengthened the Arizona Wing's confidence in the value of its mission and its content. The chief lesson that is emerging is that popularity has a price. Indeed, it may be necessary to present future events of this nature at another venue that affords greater space to accommodate an expanding interest in the Museum and its features. Because of this growth, planning for next year's event will no doubt start earlier to afford those in the Arizona Wing responsible for staging the event the opportunity to plan for and address new emerging issues.

Build an exhibition...and they will come. Despite poor media support, the exhibition nevertheless drew more than 3,000 visitors in its two-month run. Through the association with sister museums in the Phoenix Metropolitan Area, the Arizona Wing was able to refine its skill sets in exhibit presentation, which will carry back to the Museum and sustain the quality of experience that was presented at the exhibition.

CROWN AGENTS STAMP BUREAU

Summary of Event/Program

The Crown Agents Stamp Bureau is a department of The Crown Agents for Oversea Governments and Administrations Limited, which provides services that assist in the process of development. The company is owned by The Crown Agents Foundation and allocates sums for the Foundation's social and developmental objectives and applies these at the direction of the Foundation.

The Crown Agents Stamp Bureau acts as production, marketing and sales agents for a number of Commonwealth postal administrations throughout the world. These clients are either overseas territories or independent sovereign nations within the Commonwealth. The Crown Agents Stamp Bureau works with each postal authority developing stamp programs, commissioning stamp artwork and overseeing all aspects of stamp production. The Crown Agents Stamp Bureau is responsible for advertising and marketing each country's stamps and also acting as philatelic sales agents within agreed sales areas. Stamps are not sold to governments but are sold to collectors and dealers worldwide.

The basic concept is to show the history of flight from December 17, 1903, on a set of 100 postage stamps from Commonwealth post offices around the world. These postage stamps will be used for official postal purposes within each country and also sold to philatelists around the world. The U.S. Centennial of Flight Commission's logo was reproduced on a border area of the stamps for purely decorative and informational purposes promoting awareness of the centennial of flight internationally.

Goals of Event/Program

The goal of the Crown Agents Stamp Bureau was to promote awareness of the centennial of flight.

Outcome of Event/Program

Stamps from Commonwealth post offices around the world were produced with the U.S. Centennial of Flight Commission's logo in the border area.

DAVID GARRIGUS VIDEO & FILM PRODUCTIONS

Summary of Event/Program

"Kitty Hawk: The Wright Brothers' Journey of Invention" is a two-hour PBS documentary and a two-disc DVD that tells the story of the invention of the first airplane. "Kitty Hawk" features 11 of the world's leading Wright scholars and is filled with stunning replica flights, computer animations, and hundreds of rare and unpublished photographs. Legendary astronauts Dr. Neil Armstrong and Sen. John Glenn breathe life into the Wright brothers' writings by portraying the voices of Orville and Wilbur, a fitting tribute from the heroes of space to the pioneers of aviation.

Goals of Event/Program
The Wright brothers' story has been often told in the form of a children's parable of self reliance and Yankee ingenuity. "Kitty Hawk" presents a deeper and more intriguing account of how two Ohio bicycle mechanics with no formal training prevailed over the world's leading inventors to discover the secrets of flight.

Following in the inspirational path set by the Wright brothers, this production was self funded, independently produced, and written and directed over a five year period by a first time documentarian. The result is a highly accurate and definitive account of the Wrights' inventive process, an engaging story about the men behind the machine, and an epic tale of hardship, perseverance, and spectacular triumph.

Outcome of Event/Program
"Kitty Hawk" is both a critical success and is popular with television viewing audiences. Some of the critical acclaim included the following assessments: "This remarkable documentary brings their story to life," Donna Gustafson, Grading the Movies; "...diligently researched, highly informative documentary," Ed Grant, *Video Business* Magazine; "...tells a deeper, fuller story," Diane Holloway, *Austin American-Statesman*; "We get a sense of the Wrights...that written accounts and even photographs can't convey," Terry Morris, *Dayton Daily News*; and "It's highly entertaining and should please...enlighten and educate, any audience, young or old," Chris Hicks, *Deseret Morning News*, Salt Lake City.

To date, the program has aired nationally in 22 of the top 25 television markets and 43 of the top 50 markets with a national audience of more than four million viewers. "Kitty Hawk" continues to air on PBS stations throughout the country and will do so for the next three years. The program has been broadcast in several countries in Europe including England. Approximately 20,000 DVDs and VHS tapes have been distributed worldwide. "Kitty Hawk" will continue to be viewed in schools, libraries and homes for years to come. "Kitty Hawk" often is shown to large groups of people at: aviation museums as a part of their ongoing educational programs; trade shows around the world, including the Aerospace International Testing Expo in Hamburg, Germany; corporate events and conventions as an inspiration and innovation motivator, i.e., Sun Chemical Corp.; four and a half million Delta Airlines passengers saw extended segments from "Kitty Hawk" on Delta's in flight entertainment television throughout the month of December 2003; air shows including the Paris and Dayton Air Shows; and on December 17, 2003, "Kitty Hawk" was the opening presentation at the First Flight Centennial Celebration.

Centennial Legacy
"Kitty Hawk: The Wright Brothers' Journey of Invention" is the definitive documentary about the invention of the first airplane. Entertainment industry experts predict that the DVD format will remain a popular and viable format for the next 20 years or more. "Kitty Hawk," with its extensive two-disc DVD, can be relied upon to be one of the most effective and longer lasting educational influences to emerge from the centennial year of flight.

Lessons Learned
The lessons learned about releasing a national PBS special are too numerous to detail here. In general, it seems that there was never enough time to complete the tasks at hand and always an ominous deadline approaching.

MARYLAND HISTORICAL TRUST

Summary of Program

The Maryland Historical Trust (Maryland's State Historic Preservation Office), in partnership with the College Park Aviation Museum and the University of Maryland Baltimore County Martha Ross Center for Oral History, conducted a research, site and structures recordation and oral history project known as the Maryland Aviation History Centennial Project.

Goals of the Program

- To produce a comprehensive, written historical essay or summary of the most significant themes, trends and developments of Maryland aviation history from the birth of flight until the present.
- To identify and inventory the most significant structures, sites, objects and collections associated with the history of aviation in Maryland.
- To conduct detailed oral history interviews of a broad range of notable, living Maryland aviation pioneers, from the worker on the aircraft factory floor, to aircraft designers and notable Maryland aviators.
- To produce a publication written for the general public, richly illustrated with historic photographs and documents, presenting the results of the historic research, describing and illustrating the historic buildings, sites and aviation artifacts inventoried by the project, and presenting representative oral history extracts.
- To have a book introduction and presentation by the book's authors as part of a larger "100th Anniversary Celebration of the Birth of Powered Flight" event at the College Park Aviation Museum at College Park Airport which is the world's oldest continually operating airport.

All project goals were met.

Outcome of Event/Program

Media coverage of the "100th Anniversary Celebration of the Birth of Powered Flight" event at the College Park Aviation Museum and the book introduction was excellent with extensive local television coverage and articles in *The Washington Post* and *The Baltimore Sun* newspapers. Approximately 400 people attended the event.

Nearly 600 copies of the publication, *Maryland Aloft: A Celebration of Aviators, Airfields and Aerospace,* have been sold to date. The book continues to sell well. In addition, more than 1,000 pages of oral history interview documentation was generated, 125 sites associated with Maryland aviation history were documented and recorded in the Maryland Inventory of Historic Properties, and a computerized database of the sites and their history was created.

Centennial Legacy

The Maryland Aviation History Centennial Project demonstrated the rich history of aviation in the state and resulted in the recordation of 125 important historical sites. For the first time, there is now a single reference source summarizing the most important aviation-related historic buildings, sites and collections in the state. This information will be utilized by researchers, and will help to preserve and interpret to the public the most important of these resources.

Lessons Learned

- Start planning as early as possible.
- Public interest in aviation history is remarkable. The publication produced by the project has been the best selling publication ever produced by the Maryland Historical Trust Press.

- There is so much aviation history out there, as well as interesting people who can tell aviation's stories. More time and more money would have allowed the Maryland Historical Trust to pursue this further.

OKLAHOMA CENTENNIAL OF FLIGHT COMMISSION

Summary of Event/Program

On Friday, December 12, 2003, the Oklahoma Aeronautics Commission commemorated the 100th anniversary of the world's first successful powered flight. The Commission celebrated this historic achievement in the Million Air Hangar at Wiley Post Airport in Oklahoma City. Despite the winter weather, nearly 300 people attended the event. The event was designated as the official state celebration by the U.S. Centennial of Flight Commission and also honored the 40th anniversary of the Oklahoma Aeronautics Commission. Governor Brad Henry was the keynote speaker and the Lt. Governor Mary Fallin made comments as well.

Goals of Event/Program

The goal for the Oklahoma Aeronautics Commission was to celebrate and inform aviation and aerospace companies about Oklahoma's rich aviation history. The Oklahoma Aeronautics Commission also wanted to celebrate the historic event of the 100th anniversary of powered flight. Both goals were met.

Outcome of Event/Program

Press releases were published in several local newspapers. Due to the weather, news stations were unable to attend; however, various news stations did broadcast brief stories about the nationwide celebration of the 100th anniversary of flight.

Approximately 300 people attended the event, including airport managers, city officials, legislators, the State Governor, the State Lt. Governor, aviation and aerospace companies, museums, state agencies, aviation organizations and many more associated with the aviation industry. Materials from the Oklahoma Aeronautics Commission and the U.S. Centennial of Flight Commission were distributed to guests.

Centennial Legacy

This was one of the largest aviation events in Oklahoma history.

Lessons Learned

The Oklahoma Aeronautics Commission would have liked more media coverage. More active steps should have been taken in an attempt to stimulate more media coverage.

ROYAL AERONAUTICAL SOCIETY

Summary of Event/Program

The centenary of powered flight proved to be a particularly busy year for the Society's Library, which saw all forms of commemorative celebrations (books, exhibitions, merchandise, television documentaries, etc.) drawing upon the Library's extensive collections. Based upon the Library's holdings of original material relating to Sir George Cayley, Percy Pilcher and the Wright brothers, filming was undertaken for three separate documentaries for BBC North, BBC 2 and the Learning Channel in the Library's Reading Room.

There has been ongoing demand on the Royal Aeronautical Society Library's collections for old aviation photographs to be reproduced in the Society's publications and those of others. The

extensive collection was called upon to illustrate a new history of the Royal Aeronautical Society publication, a special centenary issue of the Society's technical journal, *The Aeronautical Journal*, and a pictorial history of aviation, *The Times Aviators: a History in Photographs*, which, at over £5,000, is the largest single order that the Library has received for some years. In cooperation with Royal Air Force Benevolent Fund Enterprises, the Society's Library produced a series of cards, bookmarks, poster prints and a jigsaw based on original paintings and posters held in the Library.

The summer of 2003 saw the June publication of the book *Letters of the Wright Brothers: Letters of Wilbur, Orville and Katharine Wright in the Royal Aeronautical Society Library*, edited by Brian Riddle and Colin Sinnott, which has been well received. "The book is wonderful and will be an invaluable resource. Congratulations to you and the Royal Society for this marvelous book," wrote Marianne Hudec, Orville Wright's great niece. The Royal Aeronautical Society had acquired permission for the book's publication from the trustees of the Wright Family Fund. The Royal Aeronautical Society also received the approval of the U.S. Centennial of Flight Commission and the U.S. Air Force's History and Museums Programs Centennial of Flight Office, whose logos were reproduced on the cover of the book in addition to the Royal Aeronautical Society's logo.

In August 2003, a large selection of the Royal Aeronautical Society Library's treasures recording the evolution of the concept of the airplane during 1800-1910 was displayed in the Society's "Pioneers of Flight Exhibition." The exhibition also included a photographic display "From Icarus and Daedalus to Concorde: Selected Highlights from the Royal Aeronautical Society Library Photographic Collections," first exhibited at the Society's Garden Party at the Shuttleworth Collection on June 29, 2003, and later exhibited at the Society's Heathrow Branch and at the Royal Institution of Great Britain. All visitors to the exhibition received a concise 12-page A4 booklet guide summarizing the history of aviation from Icarus and Daedulus to the end of 1910, illustrated by 30 photographs and compiled by the Society's Librarian. This has been described as "one of the best short summaries of the history of aviation which I have seen" by Society member Brian Elliott Affiliate, author of "Bleriot - Herald of an Age." On a smaller scale, the Society's Library mounted a display case of some of the Library's Wright material for the Historical Group's conference, The Beginnings of Powered Flight, held on May 10, 2003.

Centennial Legacy

To date, more than £3,300 has been received from the sales of this merchandise. The money will be put toward the conservation of the Library's major collection of early aviation posters of the 1920s and 1930s, binding pre-1940 journals and the U.S. WPA's Bibliography of Aeronautics, and developing Hargrave's original glass plate photograph negatives in preparation for a proposed book, *Lawrence Hargrave and Aeronautics: Letters and Photographs in the Royal Aeronautical Society Library.*

The Royal Aeronautical Society's celebrations culminated on December 17, 2003, the actual anniversary day, with a banquet underneath the replica of the Wright Flyer hanging in the Science Museum. The replica of the Wright Flyer took the place of the original aircraft when it was transported back to America in October 1948 after it had been on display at the Science Museum since March 1928.

THE WRIGHT EXPERIENCE

Summary of Event/Program

The year 2003 was an extraordinary one for the Wright Experience. The mission of the Wright Experience is to rediscover the secrets of the Wright brothers to inspire a new generation. The year 2003 brought incredible opportunities in every aspect of the work. Most noteworthy, the Wright Experience flew its reproduction of the Wright Flyer.

Goals of Event/Program

The major goal for the Wright Experience in 2003 was clear: to successfully fly an authentic reproduction of the 1903 Wright Flyer at Kitty Hawk, N.C., and if possible, to recreate the first flight exactly 100 years after the original event on December 17, 2003.

These goals required a series of supporting goals and activities: a full documentation of the aircraft, including unprecedented flight data acquisition; an intensive pilot training program; full scale wind tunnel testing of the Flyer; accurate and authentic flight simulator development; and continued research into the life and work of the Wright brothers. In addition, this material was the source of several public and educational outreach goals, including: continued development of in depth Web site features; development and installation of an interactive exhibit at Wright Brothers National Memorial; and numerous lectures, appearances and publications.

The Wright Experience goals were met as planned. The following brief chronology illustrates the fantastic challenge of 2003.

- Background 1997–2002:
  - Wright artifacts and documents researched, collected and analyzed, including 1903 Flyer fabric.
  - Static 1911 Model B researched and built.
  - 1900, 1901, 1902 gliders researched and built.
  - 1901 and 1902 gliders, and 1903, 1904, 1905 propellers tested in NASA's Langley Full Scale Wind Tunnel at Old Dominion University.
  - 1910 engine restored, run, and tested at Delphi Labs dynamometer.
  - 1904 Wright engine conserved.
  - 1903 Flyer researched, construction begun.
  - Pilot training program begun.
  - Educational outreach program begun.
  - Web site features for the U.S. Centennial of Flight Commission published online.

- Some milestones of the centennial year:
  - January: 1903 Flyer completed; re-creation of "Pride of the West" muslin completed; and development of "Five Challenges to Flight" exhibit begins.
  - February: Wind tunnel testing of the 1903 Flyer at NASA's Langley Research Center Full Scale Tunnel with Old Dominion University; and "In Depth: The 1902 Glider" Web site launched.
  - March: 1903 Flyer unveiled and begins National Tour with EAA's "Countdown to Kitty Hawk;" and 1903 "Harry Combs" Flyer reproduction for the National Park Service nears completion.
  - April-August: Completion of NOVA "Inventing the Flying Machine" filming; pilot training program continues under direction of Scott Crossfield with more than 200 flights successfully completed; support of EAA Flyer while on national tour with delivery, assembly and installation of the Flyer at each venue; antique Richard anemometer was successfully calibrated at National Institute of Standards and Technology; lectures and

presentations at many venues from the Cosmos Club to the Mutual Concerns of Aviation Museums meeting to Wright Brothers National Memorial; and "In Depth: The Fabric" and "In Depth: The 1903 Flyer, Part II" Web sites were completed for the U.S. Centennial of Flight Commission.

- September: The Frank Coffyn Collection Web site was launched and doubled traffic to the U.S. Centennial of Flight Commission Web site for the month of September.
- November: Encampment at Wright Brothers National Memorial begins; successful 1902 Glider flights at Jockey's Ridge State Park; first successful flight of the 1903 EAA Flyer on November 20; second attempt at flight of EAA Flyer was unsuccessful and the Flyer was returned to airworthy condition in four days; and successful capture of flight data by on board flight data recorder in both attempts with each flight fully documented in still images and video.
- December: Second successful flight of the 1903 EAA Flyer on December 3; participation of "Harry Combs" Flyer in opening of NASM's Stephen F. Udvar-Hazy Center; launching of "In Depth: The Wrights on Film" Web site for the U.S. Centennial of Flight Commission; completion of Discovery Channel documentary; opening of "The Wright Experience: Five Challenges to Flight" exhibit at the First Flight Centennial Pavilion, Wright Brothers National Memorial; participation in First Flight Centennial events from December 12-16; presentation of Mr. Harry Combs gift to the nation of a 1903 Flyer to National Park Service by Mr. Harry Combs to Secretary of the Interior Gale Norton.
- First Flight re-creation attempt on December 17: The flight attempt was unsuccessful due to lack of wind and engine malfunction due to water on the launching rail from rain. The attempt actually recreated the Wright brothers' first public attempt of May 23, 1904, when similar weather and engine conditions prevented successful flight. The lack of a successful flight at the December 17 re-creation attempt was completely offset by a loyal, enthusiastic, understanding and inspiring crowd.

Outcome of Event/Program

The Wright Experience met its goals, and is now moving forward, greatly encouraged by the success of the year. The data collected by the flight data recorder is currently being prepared for publication. It promises to shed new light on the actual performance of the Wright Flyer. The pilot training program was successful, not only as demonstrated by the numerous glider flights, but also by the successful flights of the 1903 Flyer.

The Wright Experience was overwhelmed by the response from the public. The exhibit, lectures and Web sites were met with large and enthusiastic audiences. Media coverage included stories in all the nation's major newspapers and on television, including *The Washington Post Magazine*, ABC News, CBS News, The Associated Press and many others. Foreign press included BBC, Stern Magazine and stories written as far away as India and Australia.

Centennial Legacy

The legacy of the centennial has been the attention given to the achievement of the Wright brothers, and the increased awareness and understanding of their accomplishments. The desire of the Wright Experience is to leave something tangible behind like the EAA and Harry Combs Flyers, and the Kitty Hawk exhibit. It is also important that knowledge, developed through historical research and scientific testing and analysis of the airplanes themselves, be left as a foundation for the future. Finally, it is important to know not only how and why the machines flew, but also how to fly them. The Wright Experience always has proceeded as if

Orville and Wilbur were watching. In many ways, the legacy of the centennial is not over, and never will be, because the lessons of the Wright brothers are timeless.

Lessons Learned
One of the most important lessons learned is that people always respond to the real thing. The Wright Experience felt that if it built the Flyer as authentically as the Wrights had, that the real story of the magnificence of their achievement would be understood and embraced. This proved overwhelmingly to be the case.

Another important lesson was that to be successful it was necessary to have many strong supporters, such as the U.S. Centennial of Flight Commission, the Experimental Aircraft Association, Ford Motor Company, Northrop Grumman, Mr. Harry Combs and the National Park Service.

THREE ROADS COMMUNICATIONS
Summary of Event/Program
Three Roads Communications had two major projects that were launched and/or expanded upon during the centennial of flight celebration period.

- **Legends of Airpower**
  As the build up to the centennial of flight began, Legends of Airpower was a 26-part series, produced for public television. It consisted of half-hour documentary style biographies of important figures in American aviation history that included Chuck Yeager, Benjamin Davis, Billy Mitchell, Duke Cunningham, Jimmy Doolittle, Gabby Gabreski, Jimmy Stewart, Curtis LeMay, Bernard Schriever, Hap Arnold, Chuck Horner, Russ Dougherty, Sen. John Glenn, John McCain, Charles McGee, Robert Morgan, "Tooey" Spaatz, Buzz Aldrin, Kelly Johnson, John Alison, Charles Lindbergh, Jackie Cochran, Eileen Collins, Francis Gary Powers, William Tunner and the Wright brothers.

  Three Roads Communications also produced 26 new episodes of Legends that included Jim Lovell, Everett Alvarez, Paul Tibbets, Igor Sikorsky, Don Lopez, Deke Slayton, Robin Olds, Daniel "Chappie" James, "Butch" O'Hare, Sam Johnson, Joe Foss, Tommy McGuire, Claire Chennault, George McGovern, Lorraine Zilner Rodgers, James Stockdale, Glenn Curtiss, "Tex" Hill, Albert Scott Crossfield, Richard Bong, Amelia Earhart, Edward Rickenbacker, John Boyd, Charles Bolden, Harry Combs and Richard "Steve" Ritchie.

- **Gus McLeod**
  In April of 2000, Gustavus "Gus" McLeod became the first person to fly an open cockpit airplane to the North Pole. Mr. McLeod asked Three Roads Communications to help him plan and document another adventurous flight for the centennial. For this new endeavor, Mr. McLeod decided he would attempt a Pole to Pole circumnavigation of the globe. He dedicated his trip to the pioneers of aviation, especially the Tuskegee Airmen, his childhood heroes.

  On the 75th anniversary of Lindbergh's transatlantic flight, Mr. McLeod held a press conference at the National Press Club and announced his plans to take off in a vintage Beech 18 in December of 2002. Mr. McLeod ran into problems getting the Beech 18 refitted with additional fuel tanks and other extra equipment. This caused the departure date to be moved to Columbus Day 2003. Then disaster struck. A snowplow rammed the Beech 18 and it was damaged severely enough so that it would not be available to make the flight.

Mr. McLeod, however, did not give up his dream. After much negotiation and expense, he was able to strike a deal with the Korea Aerospace Research Institute to fly their "Firefly," a modified single engine plane manufactured by Velocity of Sebastian, Fla.
The race was on to prepare the plane for the flight. In late December 2003, Mr. McLeod finally took off from College Park, Md. He stopped in Florida to have last minute adjustments made to the plane at the Velocity headquarters. Unfortunately, the "Firefly" needed more than minor adjustments, and Mr. McLeod was grounded for another month before he could continue his journey.

In late January, Mr. McLeod was finally on his way to South America and headed for the South Pole. Bureaucratic snafus in Panama, Ecuador and Argentina caused further delays. By the time Mr. McLeod reached Ushuaia at the tip of South America, it was already well into February, and what passes for summer in Antarctica was ending. Under less than ideal conditions, Mr. McLeod took two runs at the South Pole, but turned back both times because of icing. Mr. McLeod decided to head home to Maryland, regroup and try again later in 2004.

Gus McLeod is a man of indomitable spirit. He is the first civilian since Amelia Earhart to be nominated for the Distinguished Flying Cross, one of the highest honors that can be bestowed on an aviator. His efforts have captured the imagination of thousands of people around the world, and it is highly probable that he will be successful in his attempt to complete this journey when he again sets out later in 2004.

Goals of Event/Program
The objective of Legends of Airpower was to expand the series and to broaden its reach. Three Roads Communications believes that it is important for the American public to be informed about the courage, perseverance and ingenuity of the men and women who are profiled in the Legends series. Three Roads Communications was quite successful in accomplishing its objectives.

Outcome of Event/Program
Episodes from the original 26 Legends of Airpower have now aired on more than 250 public television stations. The series has been seen in every one of the nation's top 10 markets and 23 of the top 25. In all, there have been a total of more than 12,000 broadcasts of Legends episodes throughout the country. The newly expanded series of 52 episodes was then picked up by the Discovery Wings channel.

During the course of the centennial year, Legends also ran on the SpeedVision cable channel and on the Armed Forces Radio and Television Service. Additionally, Three Roads Communications produced a radio version of Legends which has been airing on Discovery Radio and on the RadioAmerica network.

The announcement of Mr. McLeod's attempted polar flight was made at the National Press Club and was covered by all the major news organizations. Interviews with Mr. McLeod have been broadcast on more than 100 radio and television stations, and articles about him have appeared in several dozen newspapers and magazines across the country.

Also, the Smithsonian Press published a book about Mr. McLeod that recounts his flight to the North Pole in an old open cockpit Stearman.

Centennial Legacy
As the project involving Mr. McLeod progressed, partnerships were formed with the education arm of the FAA, and with a team of educators from Florida Atlantic University, led by Dr. Barbara Ganson. The Florida Atlantic University team worked up a curriculum aimed at teaching middle school children about the history and geography of the countries that Mr. McLeod would be flying over, and the FAA disseminated that curriculum to schools throughout the U.S. Along with the www.gusmcleod.com Web site that Three Roads Communications established, the Florida Atlantic University team set up a special Web site that concentrated on the educational aspects of Mr. McLeod's journey.

VIRGINIA AIR & SPACE CENTER
Summary of Event/Program
There was a year long program of numerous events celebrating the centennial of flight that included:

- Grand opening of the new Adventures in Flight gallery, a $6.9 million project that features state of the art hands on exhibits and flight simulators, focusing on 100 years of flight. The gallery opening was scheduled to coincide with the nation's centennial celebrations.
- Centennial of Flight Lecture Series featuring several speakers on a variety of "100 years of aviation" topics. Speakers and topics included Col. Jay Welsh, Langley Air Force Base, and Dr. Tom Crouch, Smithsonian Institution.
- Two traveling exhibits that focused on the Wright brothers and the inventors who preceded them. "Before the Wrights: The Dream of Flight" explores the successes and failures of the pioneers and dreamers who preceded the Wright brothers and their first flight. "ORVILLE & WILBUR: The Wright Brothers' Legacy" is a photographic exhibit on loan from The Dayton Art Institute showcasing rare photographs of the Wright brothers, their first flight and other significant aviation milestones.
- Wright Brothers Puppet Show for families by Rainbow Puppet Productions.
- "Props, Wings & Flying Things" is an overnight aviation adventure educational program for student groups that meets the National Standards of Learning.
- The Virginia Air & Space Center incorporated the centennial of flight in all aspects of its educational programming, including science camps, group programming, outreach programs, science demonstrations, tours, exhibits and IMAX films. The Virginia Air & Space Center also worked with teachers through in services designed to assist educators in utilizing the centennial of flight in their lesson plans.

Goals of Event/Program
The main goals of the program were:

- To build awareness of the Virginia Air & Space Center through activities designed specifically for the centennial celebration.
- To attract new and returning visitors to the Virginia Air & Space Center with new programming, exhibits and a new Adventures in Flight gallery.
- To assist educators with their curriculum by incorporating the centennial of flight in their lesson plans through programming that meets the National Standards of Learning.
- To build interest and excitement for the centennial of flight celebration through various exhibits, activities and programming.

Outcome of Event/Program

- Local, regional and national media coverage was outstanding. Multimedia coverage included: the *Richmond-Times Dispatch*; WVEC-TV (Norfolk market); AirTran's *ARRIVALS*

Magazine; United Airlines *Hemispheres* Magazine; *Group Tour Leader*; *Popular Mechanics*; *The Washington Post*; Instantvacationmall.com; *Flying* Magazine; *The Boston Herald*; *The New Jersey Record*; *Mid-Atlantic Events* Magazine; Space.com; *Group Tour* Magazine; NASA Headquarters; and Hampton Roads Monthly Magazine.

- Attendance was measured through admission, zip code and revenue reports. The Virginia Air & Space Center experienced a 25 percent increase in admissions.
- The programming generated new traffic to Virginia Air & Space Center's Web site with hits increasing by 10 percent.
- Virginia Air & Space Center developed its own Hampton Roads Aviation Milestone public service announcements in partnership with the local ABC affiliate.

Centennial Legacy

Centennial activities allowed the Virginia Air & Space Center to expand its programming and reach new audiences through its informal education initiatives, assisting educators with curriculum and Standards of Learning testing. The Virginia Air & Space Center was recognized as the local connection for the centennial of flight.

A major goal of the Virginia Air & Space Center is to enhance Virginia's workforce by encouraging children to pursue careers related to aerospace and technology. Through additional centennial programming, the Virginia Air & Space Center was able to provide activities that improved the quality of life for the citizens of Hampton Roads, educating youth and enriching the lives of tourists. The design, development and installation of the Adventures in Flight gallery created new job opportunities for local designers, architects and contractors contributing to the economic health of Hampton Roads.

Lessons Learned

After the demise of the Aviation World's Fair and the Virginia Air & Space Center's partnership with them, Virginia Air & Space Center learned not to rely on other organizations to support initiatives. Partnerships should only be considered as part of the bigger picture.

WOLF TRAP FOUNDATION FOR THE PERFORMING ARTS

Summary of Event/Program

For *Face of America 2003*, art and science merged as Wolf Trap celebrated the 100th anniversary of the first powered flight of the Wright brothers. *Face of America 2003* was Wolf Trap's multi-media and multi-disciplinary artistic adventure series that explored the relationship between the "natural" stage and the creative process; and celebrated fellow National Parks using the rich language of the performing arts. Wolf Trap Foundation for the Performing Arts and its National Park partners established an artistic direction for *Face of America 2003* that focused on capturing the spirit of flight. To celebrate the centennial of flight, Wolf Trap joined with three other National Park units: Dayton Aviation National Historical Park; Wright Brothers National Memorial; and Tuskegee Airmen National Historic Site. Wolf Trap commissioned award winning choreographer Elizabeth Streb to create a new work on location in Kitty Hawk inspired by the Wright brothers' first powered flight and celebrating the centennial of the historic event at Wright Brothers National Memorial in Kitty Hawk. As part of the newly commissioned dance by Elizabeth Streb, the evening performance of *Face of America 2003* featured a new musical work and filmed montage celebrating the spirit of flight.

This year's celebration on September 6, 2003, included: Dr. Buzz Aldrin, National Spokesperson for *Face of America 2003* as host of the evening's activities; flyovers by U.S. Air Force F-16s and antique WWII Aircraft; the world premiere of *Wild Blue Yonder*, a multi-media

and live dance commission celebrating human flight choreographed by Elizabeth Streb and inspired by the Wright brothers' first powered flight on December 17, 1903; the world premiere of *On the Wings of a Dream*, an original high definition film on giant screens honoring flight through the eyes of aviators including original interviews with Dr. Buzz Aldrin, Patty Wagstaff, Gus McLeod, Tuskegee Airmen and Dick Rutan. The finale of the performance had the audience of 6,000 on its feet, and there were tears in the eyes of many in the audience and on the stage, as Tena Clark's "Way Up There," the official song of the centennial of flight celebration, was performed by the Fire Choir of Los Angeles, who were joined by flyers and astronauts from the Tuskegee Airmen; the U.S. Army, U.S. Navy, U.S. Air Force and Air National Guard; United and American Airlines; and NASA, as well as adventure pilots, while footage of the launching of the space shuttle and film taken from the Space Station was displayed behind them.

A pre-performance celebration featured remarks by Secretary of Transportation Norman Mineta and choreographer Elizabeth Streb. The official host for the reception was Sen. John Warner, and co-hosts included The Honorable Norman Mineta; Secretary of the Interior Gale Norton; Secretary of the Air Force Dr. James Roche; Director of the National Park Service Fran Mainella; Gen. J.R. Dailey; Col. Charles McGee of the Tuskegee Airmen; and Amanda Wright Lane.

Face of America 2003: A Celebration of Flight was funded with the help of NASA, the National Endowment for the Arts and the Richard Eaton Foundation. The premiere event host was SAIC, and corporate host was TITAN.

Goals of Event/Program

The goal of *Face of America 2003* was to capture the spirit of flight and connect the celebration with the National Parks. Wolf Trap also wanted to honor the contributions of the Tuskegee Airmen, World War II African-American military pilots.

Outcome of Event/Program

Wolf Trap estimates that 18.7 million impressions were made through media outreach, which resulted in a total of 54 media placements. Print coverage ranged from *The New York Times* to *Dance* Magazine to *Popular Mechanics*. Wolf Trap's *Face of America: a Celebration of Flight* was introduced to the public in a National Press Club Luncheon speech by Wolf Trap Foundation President and CEO Terre Jones. The performance, to a full house, included *Wild Blue Yonder*, *On the Wings of a Dream* and "Way Up There." In addition, there was a link to the International Space Station featuring Ed Liu. A Cox Cable special of the performance aired on September 16, 2003. *On the Wings of A Dream* aired on WETA High Definition Television Theatre and Comcast Network on December 17 and is being considered for an Emmy award. *Face of America* footage was also displayed on Jumbotron screens at Wright Brothers National Memorial as part of the Centennial celebration in December 2003.

Centennial Legacy

Video from the event will be made available for display at the three partner park sites: Dayton Aviation Heritage National Historical Park, Wright Brothers National Memorial and Tuskegee Airmen National Historic Site. A Web adventure from *Face of America 2003: A Celebration of Flight* can be found on www.wolftrap.org. The Web adventure and video are also part of NASA archives.

YUGOSLAV NATIONAL AEROCLUB

Summary of Event/Program

The centennial program of the Yugoslav National Aeroclub included:

- A memorial rally on the Faculty of Law on February 18, 2003, was executed in the presence of the Dean and prominent professors and students. It was well covered by the press. This event accentuated the importance of the first Serbian regulatory act on "Objects moving through the air," promulgated in 1913, as among one of the first regulations of its type in the world.
- An air show on June 15, 2003, celebrated 75 years since the first scheduled civil air transport flight in Yugoslavia. A similar celebration was held on September 26, 2003, at the juncture of the Danube and Sava Rivers, in front of the ancient fortress of Beograd. It attracted a large crowd of spectators along the left bank of the Danube and featured a remake of the aircraft EDO 1, the first Slavic designed aircraft, which had fallen in front of the Beograd fortress in January 1911. The actual remake flew from Slovenia for this special occasion. This show was led by the Air Sports Association of Belgrade and Aeroklub Galeb. This was not the only event on that occasion. On April 5, 2003, the commanding officer of the AF Corps hosted a meeting in its club with more than 100 participants from all sectors of the aeronautics community. It was a very good opportunity for the President of the Yugoslav National Aeroclub to share the posters and magazines provided by the U.S. Centennial of Flight Commission and to talk about the deeds of the Wright brothers.
- A national glider championship was rescheduled for July 2003 for the Cup of the Yugoslav National Aeroclub. It was held by the private Weihe Aeroklub which was sponsored by the Yugoslav National Aeroclub.
- An international paragliding championship held in August 2003 was organized by the member club "Cirus" on the mountain Zlatibor, where the Academic Center for Motorless Flying existed until the German occupation in 1941. Together with the centennial celebration, this paragliding championship was used to promote construction of a private venture airport for tourists.
- The annual meeting of the Academy, usually held on October 22, the anniversary of the Yugoslav National Aeroclub, was postponed until December 16, 2003, to coincide with the centennial celebration. The meeting of the Academy, organized by the Yugoslav National Aeroclub, was held in the City Hall which was once the Old Royal Palace and the most fashionable place in the State. It was very well attended. There were several celebrities and diplomats in attendance including the U.S. Embassy's Cultural Attaché Mr. Mei and the Public Relations Officer Ms. Sokovich. The annual meeting included speeches, a cultural and social program, and a mini exhibition in the lobby. A larger exhibition was opened the next day at the Technical Museum of the Serbian Academy of Sciences and Technology.
- A special edition of the magazine *Nasa krila* (Our Wings) was made possible by the financial donation by the U.S. Ambassador. *Nasa krila* was founded by the Yugoslav National Aeroclub 80 years ago when it was called "Aeroclub of the Kingdom of Serbs, Croats and Slovenes."

Goals of Event/Program

One goal was to attract the attention of the Yugoslav public in general and its youth in particular to the 100th anniversary of the first flight. Emphasis was placed on the outstanding personalities of Wilbur and Orville Wright. A second goal was to enhance the traditional friendship among aviators. A third goal was to bring together Yugoslavia's aeronautical community in order to

improve its flying sports and the air transport industry, as well as to reclaim the Home of Aero Club (Dom Aero Kluba).

Outcome of Event/Program

- The Yugoslav National Aeroclub hoped to achieve more, but had to postpone and change some of the centennial celebratory activities because of changes in the political environment.
- The Yugoslav National Aeroclub fully utilized all the support provided by the U.S. Centennial of Flight Commission. The educational materials were distributed to and were well received by aeroclubs in Serbia, Montenegro, Bosnia and Macedonia; all major newspapers; TV and other media; schools and faculty; government and military officials; and the public.

Centennial Legacy

The Yugoslav National Aeroclub learned much about aviation and its history, and looks forward to continued and increased collaboration with its neighbors.

The year 2004 offers two great events: 80 years of Yugoslavia's aeronautical press, and 60 years since several hundred downed allied airmen (mostly American) were freed from Hitler's "Europa fortress."

Lessons Learned

This program had an impact on the members of the Yugoslav National Aeroclub. The Wright brothers have shown how much can be achieved by diligence, patience, and family love and support, and that formal education is not an absolute requirement for success.

AEROSPACE INDUSTRIES ASSOCIATION

Summary of Event/Program

More than 100 custom designed model rockets were launched with a payload of two raw eggs Saturday, May 15, 2003, at the Great Meadows in The Plains, Va., in the world's largest model rocket contest for high school students. The event was sponsored by the Aerospace Industries Association (AIA) and the National Association for Rocketry (NAR).

Goals of Event/Program

The goals were to have a youth oriented event to celebrate the 100th anniversary of flight and to encourage students to enter math and science fields. Those goals were overwhelmingly met.

Outcome of Event/Program

Reporters from CBS, CNN, NASA TV, TECH TV, Discovery Canada, *The Washington Post*, *The Baltimore Sun* and *Air and Space* Magazine, among many other publications, attended the event. Despite lightening and torrential rain, with occasional breakthroughs of mist and drizzle, the contest was a roaring success. Press accounts of the contest were overwhelmingly positive, reporting on the students' enthusiasm and delight at being among the top 100 high school teams qualifying to participate in the first contest of this kind.

CNN ran six segments during the day, interviewing astronaut Jay Apt, NASA Administrator Sean O'Keefe, Sen. Mike Enzi, Marshall Space Flight Center Director Art Stephenson and author and aerospace engineer Homer Hickam (whose book "Rocket Boys" inspired the movie October Sky). The CBS Early Show interviewed astronaut Roger Crouch and students from Hurricane, W.V., and La Puente, Calif. *The Washington Post* and *The Baltimore Sun* ran half

page stories with photographs and other graphics showing the design of the rockets, and reporters from papers such as *The Denver Post* and the *West Virginia Charleston Gazette* are writing stories after the contest about teams from their area that made it to the top 25. TECH TV and Discovery Canada followed individual teams throughout the day to track whether they would experience the "thrill of victory" or, in most cases, "the agony of defeat."

Event participants included 700 students, 50 AIA staffers, about 75 NAR volunteers and approximately 1,000 spectators.

Centennial Legacy
The event was so successful that it is being held again in 2004, and it will probably become an annual event for many years to come.

DAYTON AVIATION HERITAGE NATIONAL HISTORICAL PARK

Summary of Event/Program
Dayton Aviation Heritage National Historical Park opened new and expanded interpretive and visitor facilities at all four units of the national park in 2002-2003. These included two new facilities: the Huffman Prairie Flying Interpretive Center located at the Wright Memorial at Wright-Patterson Air Force Base, and the Wright-Dunbar Interpretive Center and Aviation Trail Visitor Center and Museum located at the Wright Cycle Company building complex. The park also opened expanded facilities at two locations: the John W. Berry, Sr. Wright Brothers Aviation Center at Carillon Historical Park, and the Paul Laurence Dunbar State Memorial, which is maintained by the Ohio Historical Society. In addition, the National Park Service has continued to operate The Wright Cycle Company building and has completed the rehabilitation of the Hoover Block where the Wright brothers operated their print shop from 1890-1895. Wright-Patterson Air Force Base has rehabilitated Huffman Prairie Flying Field by removing non-historic features, restoring missing historic features, improving visitor access and installing interpretive media. The Ohio Historical Society has restored the Paul Laurence Dunbar House and barn. The national park also initiated a major new living history program, "Time Flies," sponsored by Carillon Historical Park that will be continued as an annual program.

Goals of Event/Program
The goal of Dayton Aviation Heritage National Historical Park was to have visitor facilities and interpretive exhibits completed and opened for the Centennial Celebration. This goal was met.

Outcome of Event/Program
Dayton Aviation Heritage National Historical Park received excellent local, national and international media coverage. The opening of new facilities at each of the park units during the Centennial year significantly increased park visitation.

Centennial Legacy
The infrastructure improvements to Dayton Aviation Heritage National Historical Park, though timed to coincide with the centennial celebration, were completed for the long term. Exhibits, educational programming and publications, also completed for the centennial, will endure for the long term. Publicity associated with the centennial has helped to firmly establish the national park as an aviation destination.

Lessons Learned
- It takes numerous people working extended hours over a long time to achieve the level of results necessary for a successful centennial or other major national/international event.

- It is never too early to start planning.
- Make sure stakeholders are part of the process, and make sure they see measurable results.
- A few dedicated people can accomplish a great deal.

DAYTON AVIATION HERITAGE COMMISSION

Goals of Event/Program

The Dayton Aviation Heritage Commission was responsible for assisting with the development of the Dayton Aviation Heritage National Historical Park and preserving and promoting the aviation, Wright brothers and Paul Laurence Dunbar heritage of the region. Specifically, the Commission established the following goals for itself.

- Neighborhood Revitalization: The Commission's Preservation and Development Plan, developed in support of 2003, principally focused on the restoration of several key structures within the historic neighborhood of the Wright brothers and Paul Laurence Dunbar. Key to its success in helping to transform the neighborhood was the formation of a nonprofit group in partnership with the National Historic Trust for Preservation. By using the Trust's "Main Street" approach, the Commission was able to witness the rehabilitation of historic structures that were immediately adjacent to the Dayton Aviation Heritage National Historic Park.
- Wright Brother Sites Development: The Commission completed interpretive development at two sites with a direct connection to the Wright brothers in Dayton. The family home site at 7 Hawthorne and the Wright Aeronautical Engineering Laboratory were the scene of construction in 2003 with displays and wayside signage installed to describe the historic activities that took place at these two locations. At 7 Hawthorne, visitors can visualize the house that was home to Orville and Wilbur while they were working on their invention. This site marks the place where Orville Wright was born and Wilbur Wright died. The Engineering Laboratory site has a full scale restoration of the façade of the building where Orville Wright worked following Wilbur's death. The displays communicate the long-term involvement of Orville in aviation and invention. Orville perfected his automatic stabilizer while working at this site. As the first step in completing a memorial at the site of the Wrights' Fifth Cycle Shop, an archaeological project was undertaken by the Commission in partnership with Wright State University. This effort uncovered the original foundation of the Cycle Shop where the world's first airplane was constructed along with several artifacts from the era of the Wright brothers.
- Establishing a follow-on organization: With a legislative mandate to propose a permanent management entity responsible for the continued preservation and development of the region's aviation, Wright brothers and Paul Laurence Dunbar heritage, the Commission launched a new nonprofit, the Aviation Heritage Foundation, Inc. This organization will be responsible for carrying on the work of the Commission, now that Commission operations ended on January 1, 2004, as prescribed by its enabling legislation. The Foundation has begun to plan for an education and cultural program that will become a key element of the Dayton Aviation Heritage National Historical Park. The Foundation is also an advocate for linking all of the region's heritage assets into a "National Aviation Heritage Area," and if successful, will become the management entity for the Area.

Outcome of Event/Program

Some accomplishments of the Dayton Aviation Heritage Commission included:

- More than $1.5 million dollars worth of renovation work took place in 2003 and five structures were made available for occupancy after standing vacant for more than 20 years.

- The Dayton Aviation Heritage National Historical Park opened its newest and largest interpretive center in a neighborhood that now complements the Park. Attendance for the center totaled more than 35,000 visitors within three weeks of opening, exceeding what had been the annual average attendance figure for the Park in previous years.
- The Commission's efforts in neighborhood revitalization, along with its archaeological work at the Wright brothers' Fifth Cycle Shop were publicized in *American Heritage*. The story was part of a larger feature that named Dayton as the magazine's 2003 featured city and recognized winner for historic restoration efforts.
- The archaeological project was featured in *The Baltimore Sun* feature story on the Centennial of Flight as well as numerous other local and regional newspapers.
- The Aviation Heritage Foundation, Inc. received a $300,000 grant to develop an education and cultural program for the Dayton Aviation Heritage National Historical Park. The Foundation is now poised to receive additional philanthropic funding to benefit the National Park and other heritage assets in the region.

Centennial Legacy

Clearly, the restoration of the historic Wright Dunbar neighborhood stands as the most significant legacy for the Commission. Transforming a neighborhood that had suffered more than 20 years of continuous neglect into a growing and thriving area is a monumental achievement attributed to the community support that was generated by the centennial of flight. With the National Park as the anchor, improvements are expected to continue. The creation of the new nonprofit, the Aviation Heritage Foundation, Inc., will continue to sustain the region as a center for aviation and other nationally significant heritage activities.

Lessons Learned

Collaboration among many partners can, at times, become a very difficult task. However, the chance of success in overcoming significant problems is greatly enhanced with having more organizations involved as partners. In today's era of resource shortages, collaboration is often the only way to gather enough energy to take on a large project. The Commission's work was a great example of building those partnerships and collaborative efforts. On its own, it could have achieved very little, but by bringing more to the table, it was able to see substantial progress made in meeting its legislative mandate.

U.S. AIR FORCE MUSEUM

Summary of Event/Program

Throughout 2003, the U.S. Air Force Museum at Wright-Patterson Air Force Base near Dayton, Ohio, conducted and supported an intensive and broad array of major events to commemorate the centennial of flight celebration and the U.S. Air Force's special place in the development of military aviation. Major events included:

- Special visit by President George W. Bush to the U.S. Air Force Museum grounds for a public Fourth of July celebration.
- Public opening of the museum's third hangar, the 200,000 square foot Eugene W. Kettering Building housing a Cold War Gallery.
- RE/MAX Balloon Celebration featuring a variety of hot air balloons lifting off from the museum grounds.
- The great blimp meet, a gathering of four blimps on the museum grounds for display and lift off to 'race' around Dayton.
- Special commemorative unveiling of the Centennial of Flight stamp by the U.S. Postal Service, held concurrently with a similar ceremony in Kitty Hawk, N.C.

- The official rollout and dedication of the B-2 "Spirit of Freedom" stealth bomber. The addition of the B-2 to the museum's collection represents the world's first permanent public exhibit of a stealth bomber.
- The Dawn Patrol Rendezvous World War I Fly In, a rare flying event taking place on the museum front field and featuring nearly 30 vintage, replica era aircraft. Associated activities included war re-enactors, era music and automobiles.
- A series of aviation art exhibits featuring works by some of the world's most renowned aviation artists.
- Special ceremony in conjunction with U.S. Air Force public affairs featuring aircrews that flew missions in Operation Iraqi Freedom in attendance to donate items to the museum for public exhibit. MSNBC covered the ceremony and conducted a live interview with selected crewmembers from one of the museum's galleries.

Goals of Event/Program

The overarching purpose of the U.S. Air Force Museum's initiatives and activities throughout 2003 was to leverage the centennial of flight, the museum's major expansion and the high volume of special events to build greater national and global awareness of the museum and, by extension, the mission, history and evolving capabilities of the U.S. Air Force. Through events, proactive media relations and strategic partnerships with area, national and international organizations and tourism agencies, the museum sought to expand awareness of its status as a world class institution, the world's largest and oldest military aviation museum and the national museum of the U.S. Air Force.

Outcome of Event/Program

The combination of centennial of flight activities and major expansion propelled the museum to a higher national and international profile by driving expanded media coverage and increased visitor attendance.

Area, national and international media coverage throughout the year proved intense. A visit by President George W. Bush for a public Fourth of July celebration on the museum grounds drew more than 200 media members, including all major networks, which aired the event live.

Oliver North and a Fox News film crew visited the museum in May for a lengthy, after hours film shoot in support of the show "War Stories with Oliver North." MSNBC and the Associated Press covered a special presentation ceremony in which aircrews from Operation Iraqi Freedom donated items to the museum. MSNBC conducted a live interview in the evening with members of a B-1 bomber aircrew.

During 2003, *The Wall Street Journal* featured the museum twice, once in a stand-alone feature article and again as a patriotic place to visit. Other major media organizations that visited the museum for filming or covered the museum included the History Channel, *American Heritage* Magazine, Smithsonian *Air and Space* Magazine, Discovery Channel, the national morning show The Daily Buzz, United Kingdom based aviation publication *FlyPast*, *The Denver Post*, *Cleveland Plain Dealer*, *Toronto Star*, Channel One educational television and the Travel Channel, among many others.

Through ongoing, high visibility events, the museum attracted nearly 1.35 million visitors, up from nearly 1.2 million in previous years. This included more than 30,000 people for President Bush's visit, 35,000 for a weekend RE/MAX Hot Air Balloon event, more than 53,000 for a blimp event, nearly 50,000 in late July for the weekend of the Dayton Air Show, and more than 53,000

for the Dawn Patrol Rendezvous World War I Fly In. The museum experienced a record attendance for the month of July in 2003, as more than 264,000 people flocked to the museum during the peak of Dayton's centennial of flight celebration.

Further confirming the museum's 2003 success, the institution's Web site received nearly 70 million total hits, a 21 percent increase from the previous year's total of more than 57 million.

Centennial Legacy

The 2003 centennial of flight celebration yielded a positive impact on many fronts for the U.S. Air Force Museum, including:

- Expanded the visibility and enhanced the reputation of the U.S. Air Force's national museum on a national and global scale.
- Further positioned the U.S. Air Force Museum as an ideal venue conducive to major, high level outdoor and indoor events and ceremonies of national and international significance.
- Set the foundation for continued growth and improvement through the opening of the 200,000 square foot Eugene W. Kettering Building and the comprehensive realignment of aircraft and exhibits into a more chronological and thematic gallery format. These two achievements will go forward as an enduring legacy to the centennial of flight celebration.
- Promoted the legacy of the Wright brothers and the development of military aviation, emphasizing the central role of vision, innovation and exploration to national security, global stability and the expansion of freedom, democracy and opportunity across the world.

Lessons Learned

The U.S. Air Force Museum experience during the centennial celebration reinforced the importance of cultivating and sustaining strategic partnerships with affiliated organizations to optimize the combined impact of shared resources, expertise and capabilities; and the need for better communication between organizations and agencies, particularly with respect to proactively identifying potential obstacles, developing common solutions and more clearly articulating each organization's role and responsibilities in advance of event execution.

WRIGHT STATE UNIVERSITY

Summary of Event/Program

From March 2000 through December 2003, Wright State University Libraries, Special Collections and Archives, was involved in numerous projects commemorating the centennial of flight. These projects included publications of original documents, albums and photographic materials; the design and installation of numerous exhibits and symposiums; participation in media interviews and film documentaries; numerous special events and receptions; and the creation of a Web site containing thousands of images and other materials about the Wright brothers' lives and accomplishments.

Wright State University, in a more general way, presented additional cultural events during 2003 to celebrate the Wright brothers' achievements which included:

- February 2003, The Song of Flight, a free community concert at Dayton's Masonic Lodge was presented by the music departments of Wright State University and the University of Dayton.
- April 2003, Aviation in Art and Culture Symposium, was part of the Aviation and the Human Experience Symposium, a cooperative venture by local universities.
- Spring 2003, the Wright State University's Wind Symphony premiered *Man Flies*, composed by Professor Leland Bland and directed by David Booth.

- Spring 2003, the Art Galleries exhibited photographs of early flying machines by French artist Jacques Henri Lartique.
- Summer 2003, there was an International Symposium of Aviation Psychologists hosted by Wright State University in Dayton.

Goals of Event/Program

The following goals were exceeded at all levels:

- Educate local, regional, national and international audiences about the history of the Wright brothers and the invention of powered flight.
- Make the world aware of the rich Wright Brothers Collection and other aviation history resources available at Wright State University.
- Provide an environment for learning through symposiums, exhibits, conferences and other special events.
- Digitize and make available the rich collection of photographs in our Wright Brothers Collection.
- Publish selected materials from our collection to make these valuable primary sources available to a wider audience.
- Mount exhibits to share these materials with the world at local, regional, national and international venues.
- Bring attention to Wright State University as an institution of higher learning and as the namesake of Wilbur and Orville Wright.

Outcome of Event/Program

Among the numerous events, the following outcomes are the most noteworthy:

- Extensive media coverage increased awareness of Wright State University and Special Collections and Archives.
- Increased awareness and education of audiences on the history of the Wright brothers and the importance of Dayton in the invention of flight.
- All events were well attended by local and regional audiences.
- Items from our collection were exhibited at national and international venues and reached thousands.
- Web site traffic, requests for information and images from the collection, requests for media interviews and participation in documentaries was phenomenal.
- K-12 audiences utilized our online information packet about the Wright brothers for history day and science fair projects.

Centennial Legacy

Special Collections and Archives established itself as one of the key institutions for researching the Wright brothers and the history of aviation through its publications, Web site and image database. Through Wright State University's events, programs and projects, the world was educated about the Wright brothers and the impact of powered flight. Increased preservation and access was facilitated to one of the richest Wright Brothers Collections in the world. Learning was fostered through symposiums and conferences for scholars, historians, enthusiasts and others.

Lessons Learned

The invention of powered flight is an accomplishment that the entire world takes pride in. Flight draws people together in a variety of ways and it was an anniversary that belonged to everyone. The importance of cooperative projects in a celebration of this magnitude should not be underestimated.

Section 5 – National Commemorative Issues

Commemorative Stamp

North Carolina's First Flight Centennial Commission requested, through Senator Helms' office in 1996, that the U.S. Postal Service consider producing a stamp that would honor the Wright brothers and their historic achievements. The U.S. Centennial of Flight Commission wrote to the Chairperson of the Citizens Stamp Advisory Committee on November 9, 2000, also requesting consideration of the issuance of a new U.S. stamp to celebrate the 100th anniversary of the first powered flight made by Wilbur and Orville Wright on December 17, 1903. Gen. Dailey, Chairperson of the U.S. Centennial of Flight Commission, asked his fellow Commissioners to present similar requests. On November 17, 2001, the U.S. Centennial of Flight Commission received a response saying, "We have made preliminary plans to commemorate this event in 2003, but we are not prepared to release the details at this time."

On May 22, 2003, the U.S. Postal Service issued a 37-cent First Flight commemorative postage stamp to mark the 100th anniversary of the first controlled, powered, sustained flight in a heavier-than-air flying machine. The official first day of issue ceremony for the First Flight stamp took place at 10:30 a.m. at both the U.S. Air Force Museum in Dayton, Ohio, and the First Flight Centennial Pavilion at Wright Brothers National Memorial in Kill Devil Hills, N.C. Eighty-five million self-adhesive First Flight stamps were printed and made available in a souvenir sheet of 10 stamps of one design. The stamp illustration by McRay Magleby of Provo, Utah, depicts Orville Wright at the controls of the 1903 Wright flyer. Text at the bottom of the design reads: "First Flight - Wright Brothers - 1903." The front of the souvenir sheet features a detail of a photograph of Orville and Wilbur Wright taken in Pau, France, in 1909. To see the First Flight stamp, please visit www.usps.com/communications/news/stamps/2003.htm, and go to May 22, 2003.

Commemorative Coin

In November 1997, federal legislation was passed directing the U.S. Mint to produce a series of commemorative coins honoring the Wright brothers and their achievements. The First Flight Centennial Foundation initiated the legislation for this program and is the designated recipient organization. The Foundation provided input for the designs of the three coins that are in denominations of $10, $1 and $.50. The U.S. Mint produced the coins and the sale of the coins began August 1, 2003 for one year. The Foundation expects to receive a portion of the proceeds on a matching basis from the sale of the coins. Surcharges realized from the sale of the coins will, by statute, be used for: (1) repairing, refurbishing and maintaining the Wright Monument on the Outer Banks of North Carolina; and (2) expanding or, if necessary, replacing and maintaining the visitor center and other facilities at Wright Brothers National Memorial on the Outer Banks of North Carolina, including providing educational programs and exhibits for visitors.

A quarter commemorating the Wright brothers' first flight was unveiled in Raleigh, N.C., on March 12, 2001, by U.S. Representative Etheridge, North Carolina Governor Easley and U.S. Mint Director Johnson. This quarter was the 12th quarter released in the 50 State Quarter program.

On March 18, 2002, the Ohio quarter was unveiled as part of the 50 State Quarter program. Ohio selected a design featuring the Wright Flyer and former astronaut Sen. John Glenn, with the slogan "Birthplace of Aviation Pioneers."

Section 6 – Licensing Agreements

Under Section 9 of the Centennial of Flight Commemoration Act, as amended, the NASA Administrator, after consultation with the U.S. Centennial of Flight Commission, was able to make the U.S. Centennial of Flight Commission's logo available for use through licensing in a variety of ways, including sponsorships and product licensing. The U.S. Centennial of Flight Commission signed eight formal licensing agreements with C. Forbes, Inc.; Spin Master Toys; Custom Pin and Design; Welcome Enterprises; The Alaska Chapter of The Ninety-Nines, Inc., International Organization of Women Pilots; Flight Line Apparel Group, LLC; Kestner Educational Services, LLC; and Disc Marketing.

Tena Clark, Chief Executive Officer of Disc Marketing, was commissioned in 2001 by the NASA Art Program to write a song, "Way Up There," commemorating the centennial of flight.

As of April 30, 2004, royalty income from the above licensing agreements totaled $10,678.01.

Section 7 – U.S. Centennial of Flight Commission Web Site

One of the primary goals of the U.S. Centennial of Flight Commission was to increase the overall awareness of the centennial and related centennial events. To assist in achieving that goal, the U.S. Centennial of Flight Commission legislation enabled it to develop and maintain a public Web page that included activities related to the centennial of flight celebration and the history of aviation. The U.S. Centennial of Flight Commission Web page, www.centennialofflight.gov, was continually updated with educational and historical information, events, sights and sounds, and U.S. Centennial of Flight Commission information. The site itself was intended to be the single point of entry for activities and information related to the U.S. Centennial of Flight Commission, and it contained information for everyone from aviation novices to educators to industry experts. The number of hits to the U.S. Centennial of Flight Commission Web site in December 2003 was nearly 3.7 million.

The U.S. Centennial of Flight Commission was specifically required to provide recommendations and advice on the most effective ways to "maintain, publish, and distribute a calendar or register of national and international programs and projects concerning, and provide a central clearinghouse for information and coordination regarding dates, events, and places of historical and commemorative significance regarding aviation history in general and the centennial of powered flight in particular." This searchable and self-submitting calendar was one of the primary features of the Web site. Visitors to www.centennialofflight.gov were able to find the most comprehensive calendar of events on Centennial-related activities. In total, since June 2001, more than 994 different centennial events appeared on the U.S. Centennial of Flight Commission Web site Calendar of Events.

In December 2002, the Web site was redesigned to make it more user friendly. Kids, educators, enthusiasts and the media were able to find a wealth of information organized by categories of interest. After choosing one of the four categories, visitors were directed to interesting short essays on flight, the Wright brothers and aerospace; video clips about the Wright gliders; free posters and bookmarks available for download; or the latest news on the national celebration. The information in each section was designed to appeal to each specific audience. The U.S. Centennial of Flight Commission used a competitive procurement process to add new material to the Web site. These contracts were awarded to organizations that provided credible, historical and educational information electronically to enhance the content of the site. This procurement was advertised a total of four times.

The homepage featured several "links of the day," including an educational essay, an aviation fact of the day and an aviation-related link that changed daily. The Weather Contest of the Century drew interest from K-12 classroom teachers and students from across the country. Thousands of students conducted research and made predictions about temperature, wind speed and direction, and additional climatic conditions in Kill Devil Hills on December 17, 2003 – the actual 100th anniversary of the first flight. The contest winners were listed on the Commission Web site.

Web site content included:

About the Commission – Information on the legislation, the Commissioners and Advisory Board members, news, the National Plans, meeting minutes and status reports.

Calendar of Events – A comprehensive list of activities, symposiums, exhibits, air shows, educational activities and more that took place through March 2004.

Wright Brothers' History – This section houses the Library of Congress bibliography of Wright-related resources as well as the Chronology and Flight Log; the Brunsman articles; interactive learning modules from The Wright Experience; short informative essays including "Kitty Hawk by Rail," "Charles E. Taylor" and "The 1899 Kite;" as well as a series of links to other Wright brothers information sources.
History of Flight – A comprehensive library of essays and images on the history of flight. This section also includes a timeline which links to more detailed information about aviation events from before the Wright brothers to the present day.
Sights and Sounds – An assortment of images, movies and special collections that capture the accomplishments of the Wright brothers and others who made significant contributions throughout the history of aviation and aerospace. As part of the NASA Art Program, a centennial song, "Way Up There," was commissioned and later nominated for a Grammy Award. "In the Studio with Dr. Robert T. McCall," who created the Centennial of Flight mural celebrating 100 years of aviation accomplishments, was recently added to the Sights & Sounds category.
Licensed Products – View collections of souvenirs and gift items to commemorate the 100th anniversary of the first powered flight. The companies listed are all official licensees of the U.S. Centennial of Flight Commission.
Education – Resources that will help educators and their students celebrate 100 years of flight. Teachers can download Wright brothers posters and a Centennial of Flight bookmark, view live Web casts, and access an Educational Resources Center Matrix representing more than 50 government, industry and labor organizations promoting aviation and aerospace education. When the U.S. Centennial of Flight Commission Web site is archived, most of the thousands of links listed under the Educational Resources Center will be made available on the National Coalition for Aviation Education Web site at www.aviationeducation.org.
Related Links – Suggested Web sites to visit for information about aviation, aerospace, international celebrations and much more.

The Web site has been well recognized by several organizations as an outstanding site for educators and students. It was selected for inclusion on EDSITEment (edsitement.neh.gov) as one of the best online resources for education in the humanities. EDSITEment is a partnership with the National Endowment for the Humanities, the National Trust for the Humanities and the MarcoPolo Education Foundation and serves as a gateway to the highest quality humanities-related educational content on the Internet.

The Web site also was chosen to be included in the Digital Dozen, a list of exemplary Web sites for educators selected by the Eisenhower National Clearinghouse. Foundation Web Design included the U.S. Centennial of Flight Commission's Web site in the Web Resources section, which gives readers examples of great Web sites. The U.S. Centennial of Flight Commission's Educational Resources Matrix was selected as a "Best Bet" on the *USA Today* Education Web site in July 2001 and was chosen by the National Science Teachers Association (NSTA) to link to its site, a popular and well respected source of information for many teachers and students. The U.S. Centennial of Flight Commission's Web site was mentioned in the March 2001 edition of *Popular Science*'s feature "Web Watch."

The U.S. Centennial of Flight Commission Web site has been submitted for consideration for the Pirelli INTERNETional Award 2003. The Pirelli Award is an international multimedia award for the diffusion of scientific and technological culture entirely carried out on the Internet. In 2001, the U.S. Centennial of Flight Commission Web site was one of 20 finalists from more than 1,000 entries.

Google (www.google.com) celebrated the Centennial of Flight by showing a Wright Flyer on its homepage. The U.S. Centennial of Flight Commission site was featured as the "Web Site of the Day" in the Transportation Communications Newsletter. The newsletter covers all aspects of communications in the transportation field and currently is subscribed to by more than 4,900 transportation professionals around the world.

The Commission has received many letters from educators complimenting the educational resources found on the Web site. One letter read:

> *As an elementary librarian in New Castle, Del., I want to express my gratitude for your wonderful site. The week before Christmas typically presents a huge challenge to keep children's interest. This year, I decided to highlight the Centennial of Flight for my fourth and fifth grade classes. I showed four of the movie clips from your site. I was amazed that in each class, the majority of the students were totally captivated by the story of the Wright brothers' discovery of the secrets of flight which began the exciting century of discovery culminating with space exploration. The clear presentation of the concepts of flight kept the interest of the students, and the length of each clip was just right to keep them involved. I showed the 1899 kite, the1900 glider and then skipped to the 1903 flight ending with the Tribute of 100 Years of Flight to show them how the Wrights initiated the journey of modern aviation. I hope that you keep this site available because it is such a valuable educational resource. Thanks for a wonderful job!*

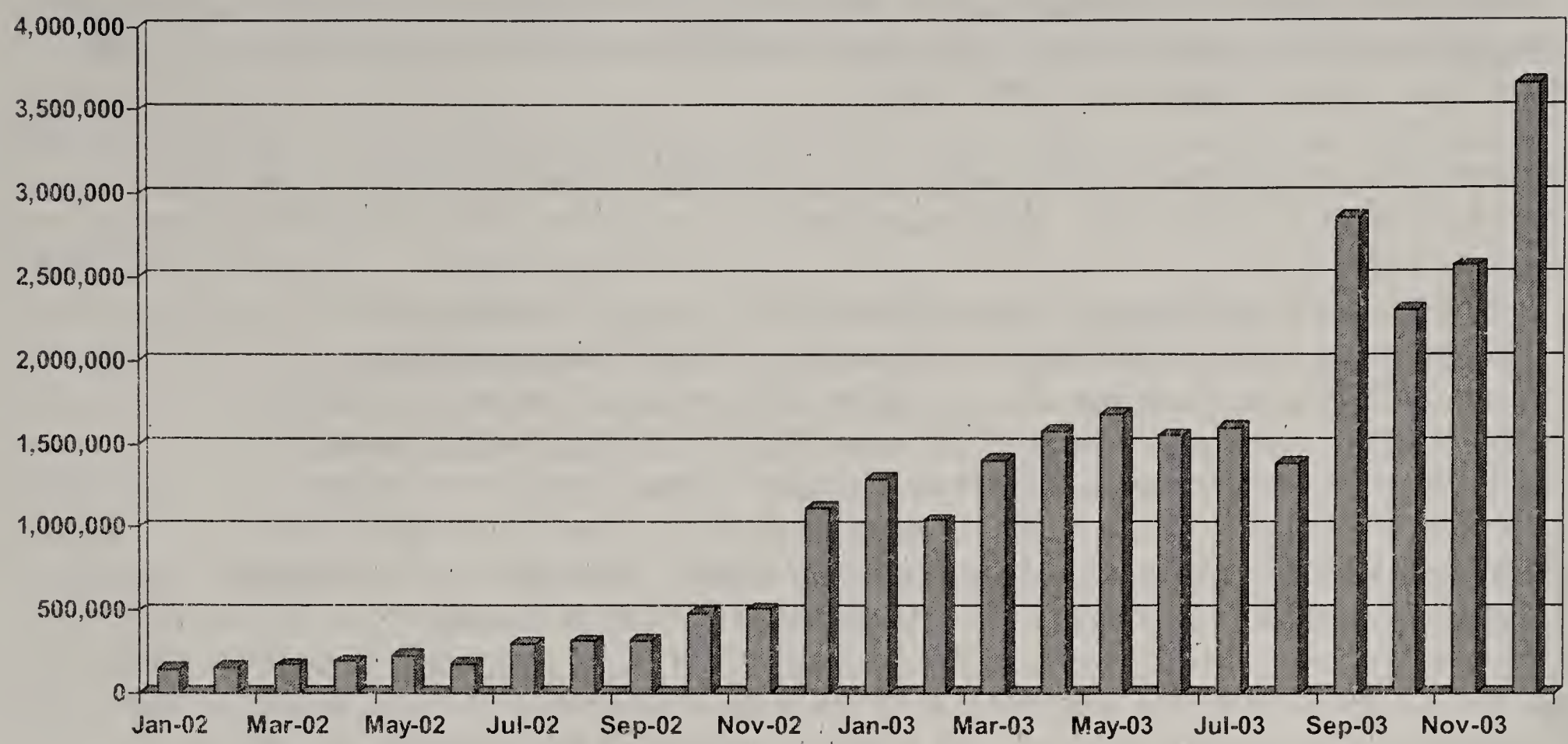
And another read:

> *Dear Sir/Madam:*
> *I wanted to let you know that I have built a full, one-year course in aeronautics based on your Web site. The information available seems to be endless. I certainly hope you plan to leave the site up for a long time. Thank you so much for this invaluable information.*
>
> *First Coast Technical Institute*
> *St. Augustine, Fla.*

Preserving the U.S. Centennial of Flight Commission Web site

The NASA History Office has agreed to take over the U.S. Centennial of Flight Commission Web site. The Web site will stay in tact with the same URL. Transition to the History office will be transparent to Web site visitors. Two servers owned by the Commission will be given to NASA.

Centennial of Flight Web Site Number of Hits (Jan. 2002 – Dec. 2003)



**The U.S. Centennial of Flight Commission Web site went live in October 2000, however usage was not significant until promotion of the campaign began in 2002.*

Section 8 – Evaluation

Congress charged the U.S. Centennial of Flight Commission with playing the leading role in coordinating and publicizing public activities celebrating the achievements of Wilbur and Orville Wright and commemorating a century of powered flight. The U.S. Centennial of Flight Commission took this mission and created three goals for the celebration:

- To harmonize and enhance all efforts to celebrate and commemorate the centennial of powered flight.
- To increase public understanding of the Wright brothers' achievements as a triumph of American ingenuity, inventiveness and diligence in developing new technologies that help define the American century.
- To engage the interest of the American public and the world in the 100 year history of flight.

To achieve these goals, the U.S. Centennial of Flight Commission was tasked with advising the President, Congress and federal agencies on the most effective ways to encourage and promote national and international participation in commemoration of the centennial of powered flight. The U.S. Centennial of Flight Commission also was to plan and develop, in coordination with the First Flight Centennial Commission and the First Flight Centennial Foundation of North Carolina, and Inventing Flight: Dayton 2003 of Ohio, programs and activities that were appropriate to commemorate the 100th anniversary of flight. In addition, the First Flight Centennial Federal Advisory Board was created to offer advice and counsel to the U.S. Centennial of Flight Commission.

In retrospect, the "*Centennial of Flight: Born of Dreams – Inspired by Freedom*" commemoration was a tremendous success, largely because of the leadership role the U.S. Centennial of Flight Commission played and the cooperation that was shown among all of the U.S. Centennial of Flight Commission Partners. The results of the campaign could not have been achieved by any one organization alone – instead, the commemoration was reliant upon the hard work and dedication of groups and individuals across the country and around the world.

In working together, the U.S. Centennial of Flight Commission and its Partners not only met, but exceeded, the stated goals. Highlights of the ways in which these goals were met include:

The U.S. Centennial of Flight Commission harmonized and enhanced centennial celebration efforts.

- A partnership program was created to allow organizations to become a part of the larger, national celebration. This also enabled Partners to leverage each other's assets and made events like The Centennial of Flight at Rockefeller Center successful. The event would not have been as strong without the participation of several Partners, including the U.S. Air Force, NASA and the FAA.
- A master calendar was developed, updated and maintained on the U.S. Centennial of Flight Commission Web site to showcase the flight-themed activities and events taking place around the world.
- The U.S. Centennial of Flight Commission leveraged existing relationships to secure speakers and participants in Partner events. For example, the U.S. Centennial of Flight Commission formed a relationship with actor John Travolta through the national kick off, and worked with Partners including the AIAA, Dayton and North Carolina to secure his participation in additional events. Involvement from celebrities such as John Travolta led to higher-profile events and increased recognition among the public. In addition, well known

aviation icons and Advisory Board members such as Dr. Neil Armstrong, Dr. Tom Crouch and Patty Wagstaff were active participants in many centennial events.

The U.S. Centennial of Flight Commission increased public understanding of the Wright brothers' achievements as a triumph of American ingenuity, inventiveness and diligence in developing new technologies that help define the American century. This was done in a number of ways.

- The creation, maintenance and continual updating of the U.S. Centennial of Flight Commission Web site, including short essays, historical information about the Wright brothers and other aviators, educational Web-based games, movies and more. Web site hits for December 2003 totaled 3.66 million for the month.
- The distribution of educational material. The U.S. Centennial of Flight Commission and its Partners created and distributed educational brochures, posters, bookmarks and more to schools, libraries, home schools and museums. More than 500,000 32-page brochures chronicling the history of flight were distributed in airline seatbacks, and an educational toolkit was distributed to more than 140,000 educators. The U.S. Centennial of Flight Commission traveling exhibit visited 45 locations in 2003.
- The U.S. Centennial of Flight Commission, in partnership and cooperation with NASA, the U.S. Air Force and the FAA, produced, printed and distributed a significant amount of quality educational and informational resources. Nine different products, including posters, decals, bookmarks and brochures were produced. The U.S. Centennial of Flight Commission printed 717,575 products, NASA printed 1,703,235 products, the U.S. Air Force printed 1,000,000 products and the FAA printed 63,825 products, for a grand total of 3,484,635 printed educational products. These figures do not include the educational materials produced by other Centennial Partners and event planners – only those centennial products developed by the U.S. Centennial of Flight Commission and NASA.
- Educational media relations efforts exposed more than 12 million students to the story of flight through publications such as *The Mini Page*, *Time for Kids* and Channel One.

Engage the interest of the American public and the world in the 100 year history of flight.

- More than 994 different centennial events were entered on the U.S. Centennial of Flight Commission calendar.
- From December 2002-December 2003, centennial stories created more than 1.4 billion impressions. More than 350 articles ran in the top 100 print publications, including *The Wall Street Journal*, *The New York Times* and *USA Today*. More than 110 segments ran on national network television.
- More than 22 million people attended 14 different Centennial Partner events. Hundreds of thousands of additional people participated in grassroots community events and programs throughout the county.
- The Smithsonian's National Air and Space Museum, a Centennial Partner, experienced a 31 percent increase in attendance during the Centennial year, while all other museums on the National Mall experienced a decrease in attendance.

The Commission's activity was not contained to the United States. A large number of countries throughout the world participated in the Centennial of Flight commemoration. Countries that contacted the Commission to share information about their events or request information about events taking place in the United States included: Canada; Abbotsford, B.C.; Argentina; Singapore; Israel; Portugal; Bulgaria; Sweden; Australia; Alexandria, Egypt; Turkey; Indonesia; Vienna, Austria; Republic of Singapore; Hong Kong; Ireland; Puerto Rico; Sri Lanka; Brussels, Belgium; Holland; El Salvador; Mexico; Britain; Korea; Argentina; Norway; China; South Wales;

United Arab Emirates; Switzerland; Italy; Finland; Luxembourg; Slovenia; Taiwan; Ukraine; the Netherlands; Japan; Spain; New Zealand; Germany; France; South Africa; India; Russia; Slovenia; Costa Rica and Brazil.

In addition, the U.S. Centennial of Flight Commission was able to work with its Partners to request Presidential appearances at centennial events. President George W. Bush appeared at both Inventing Flight in Dayton in July and the First Flight Centennial Celebration in North Carolina in December, and delivered powerful speeches honoring the Wright brothers and their achievements. Several other senior appointed and elected officials, as well as high-ranking senior military leaders, participated in the commemoration throughout the course of the year.

The work of the U.S. Centennial of Flight Commission could not have been completed without the assistance of the First Flight Centennial Federal Advisory Board. Comprised of 19 members and chaired by Dr. Tom Crouch, senior curator of the Smithsonian National Air and Space Museum, the Advisory Board was instrumental in formulating recommendations on how to best promote national awareness of the centennial commemoration and the achievements of the Wright brothers; increasing the visibility of centennial activities; and identifying ways in which individuals and organizations could be encouraged to participate in the commemoration.

Most importantly, the U.S. Centennial of Flight Commission and the Advisory Board served as a resource for all Centennial Partners, providing counsel on a range of issues and bringing everyone together under a national umbrella. Its leadership role was essential in proving to the media and the public that this was not just a regional event, but a national commemoration worthy of celebrating, for both the amazing achievements that have taken place over the last century, as well as those yet to come.

The U.S. Centennial of Flight Commission's legacy extends far beyond the educational information that it created and shared with the world. The U.S. Centennial of Flight Commission, its Partners and the communities, museums, schools and organizations around the world who participated in the commemoration generated energy and enthusiasm in the next generation of innovators and inventors. It is this energy that will propel us into the next century of flight, and the many milestones that are yet to come as aviation and aerospace pioneers continue to explore and discover what 100 years ago was unthinkable.

Appendix 1– Points of Contact/Web sites

U.S. Centennial of Flight Commission	www.centennialofflight.gov
Inventing Flight: Dayton 2003 J. Bradford Tillson	937.226.7264
First Flight Centennial Foundation	www.firstflightcentennial.org
EAA Tom Poberezny, President	www.countdowntokittyhawk.org 920.426.4810
FAA Sheila Bauer National Aviation Education Program Manager	www1.faa.gov/apa/centuryofflight 781.238.7028
National Aeronautics and Space Administration Tony Springer	wright.nasa.gov 202.358.0848
National Air and Space Museum John Benton, Executive Officer	www.nasm.si.edu 202-633-2357
American Institute of Aeronautics and Astronautics Merrie Scott, Project Manager	www.flight100.org 703.264.7530
Aviation Week Next Century of Flight www.AviationNow.com/content/ncof/index2.htm	
First Flight Centennial Commission	www.firstflightnc.com
National Air Tours Greg Herrick, President	www.NationalAirTour.org 651.255.1999
Rockefeller Center	www.rockefellercenter.com
Space Day Foundation	www.spaceday.org
U.S. Air Force Centennial of Flight Office	www.centennialofflight.af.mil
Library of Congress Dr. Leonard C. Bruno, Manuscript Historian Science and Technology	www.loc.gov 202.707.1214
AirsideTV.com Arturo Weiss	www.airsidetv.com 386.615.6519
Arizona Wing of the Commemorative Air Force Herb Zinn	www.arizonawingcaf.org 602.250.3648
Challenger Center for Space Science Education	www.challenger.org

Chicago Centennial of Flight Commission	www.chicagocentennialofflight.org
Crown Agents Stamp Bureau Allen Price	www.crownagents.com 44.0.208.710.6328
David Garrigus Video & Film Productions David Garrigus, President	www.davidgarrigus.com 254.399.8333
Oklahoma Centennial of Flight Commission www.tulsaairports.com/press_releases/100_years_flight.html Erin Wright	405.604.6901
Royal Aeronautical Society Brian Riddle, Librarian	www.aerosociety.com 020.7670.4362
The Wright Experience Ken Hyde, Founder	www.wrightexperience.com 540.347.1909
3 Roads Communications Russell Hodge, Executive Producer	www.legendsofairpower.com
U.S. Navy Navy Chief of Information (CHINFO)	www.navy.mil
Virginia Air & Space Center Kim K. Hinson, Deputy Director	www.vasc.org 757.727.0900
Wolf Trap Foundation for the Performing Arts Jo Hodgin, Director, Planning and Initiatives	www.wolftrap.org 703.255.4090
Yugoslav National Aeroclub Vladimir Sams	vladasams@yubc.net
Third Millennium Entertainment Dann Moss, President/Chief Executive Officer	703.790.1949
Aerospace Industries Association Alexis Allen, Director, Communications	www.aia-aerospace.org 202.371.8544
Dayton Aviation Heritage National Historical Park Lawrence Blake, Superintendent	www.nps.gov/daav/ 937.225.7705
Dayton Aviation Heritage Commission Anthony F. Sculimbrene, Executive Director	937.222.6039
Maryland Historical Trust Richard Hughes, Project Director	www.marylandhistoricaltrust.net 410.514.7660

National Aviation Hall of Fame Mike Jackson	www.nationalaviation.org 937.256.0944 ext. 14
National Park Service, North Carolina Lawrence Belli, Superintendent Outer Banks Group	www.nps.gov/wrbr 252.473.2111
Outer Banks Visitor Bureau Lorrie Love, Group Services Manager	www.outerbanks.org 252.473.2138
U.S. Air Force Museum, Dayton, Ohio Chris McGee, Public Affairs Division	www.wpafb.af.mil/museum 937.255.4704 ext. 332
Wright-Patterson Air Force Base	www.wpafb.af.mil
Wright State University Dawne Dewey, Head Special Collections and Archives Wright State University Libraries	www.libraries.wright.edu 937.775.2011

Appendix 2 – U.S. Centennial of Flight Commission Budget

The budget chart on the next page provides the actual funds obligated during fiscal years 1999, 2000, 2001, 2002 and 2003; and the plans for fiscal year 2004.

The General Accounting Office audited the U.S. Centennial of Flight Commission financial activity for fiscal year 2002, and found that in fiscal year 2002:

- All 114 of the Commission's recorded obligations and expenditures were supported by documentation that was approved by management.
- The Commission recorded the receipt of one payment under a licensing agreement for the use of the logo of the Centennial of Flight Commission. The Commission recorded no other receipts for user fees, cash donations, or in-kind donations for fiscal year 2002.
- The Commission received from FAA an allotment of $900,000 from its operations appropriation and received $1,000 in fees under a licensing agreement for the Commission's logo.

GAO recommended that the Executive Director of the Commission:

- Direct NASA to correctly record the Commission travel expenditure of $937 that was improperly coded and paid out of NASA's direct funds.
- Strengthen internal controls over licensing agreements by monitoring the timely receipt of fees in accordance with the agreements.
- Collect licensing fees due the Commission since the beginning of the June 30, 2002, quarter, in accordance with licensing agreements.

The Commission's Executive Director agreed with the recommendations and stated that the Commission has (1) requested that NASA correctly record the travel expenditure, (2) developed a spreadsheet to monitor the timely receipt of licensing fees, and (3) collected licensing fees due it.

In fiscal year 2003, the U.S. Centennial of Flight Commission continued with the third year of the Outreach and Web enhancement procurements and the fourth year of the Web site maintenance effort.

In fiscal year 2004, the U.S. Centennial of Flight Commission budget is $600,000. The U.S. Centennial of Flight Commission plans to spend approximately $150,000 of this amount and return $450,000.

CENTENNIAL OF FLIGHT COMMISSION

STATUS AS OF February 2, 2004

ITEM	FUNDING APPLIED FROM	FUNDING APPLIED TO or FOR	FY 1999 $250,000 Actual Obligations	FY 2000 $600,000 Actual Obligations	FY 2001 $750,000 Actual Obligations	FY 2002 $900,000 Actual Obligations	FY 2003 $894,150 Actual Obligations	FY 2004 $600,000 Planned
Travel.	FAA	Commission Members & Staff.	$0	$3,955	$4,811	$2,074	$5,821	$15,000
Web Site Design and Development	FAA	SAIC Contract #DTFA01-99-P-12913.	$209,324	$29,948	$0	$0	$0	$0
Two Servers	FAA	Sun Microsystems - Purchase Order #DTFA01-99-P-50526	$40,334	$0	$0	$0	$0	$0
Time Line and Essay Contract	FAA	Proxtronics, Inc. Contract #DTFA01-00-C-A0102. FY 00 funds applied thru 9/30/01.	$0	$173,909	$31,800	$40,000	$0	$0
Library of Congress - Updated Bibliography of the Wright Brothers.	FAA	Interagency Agreement #DTFA01-00-X-2058. FY 00 funds applied thru 9/30/01.	$0	$49,234	$0	$0	$0	$0
Budget Recission of 0.22% in FY 01.	FAA	E-mail dated December 29, 2000 from FAA/John Mathewson to FAA/Suzanne Holloway	$0	$0	$1,650	$0	$0	$0
Miscellaneous.	FAA	FY 00: Stamps for Gen Dailey $66.00, Oshkosh Air Show $118.10; FY 01: Anaconda Press business cards $530.00.	$0	$184	$530	$0	$0	$0
Outreach Contract - **OBLIGATED or PLANNED.**	FAA	Carter Ryley Thomas; #DTFA0101CA0069.	$0	$0	$300,000	$380,000	$350,000	$0
Web Enhancement Contracts - **OBLIGATED or PLANNED.**	FAA	PENDING SELECTIONS AND AWARDS.	$0	$0	$228,300	$134,950	$169,349	$0
Subtotal	FAA	As above.	**$249,658**	**$257,230**	**$567,091**	**$557,024**	**$525,170**	**$15,000**
Travel	NASA	COFC. Commission Members & Staff. Interagency Agreement #DTFA01-01-X-02014.	$0	$0	$15,000	$25,000	$25,000	$0
Credit Card	NASA	COFC. Commission Members & Staff. Interagency Agreement #DTFA01-01-X-02014.	$0	$0	$3,000	$0	$1,000	$0
Office Space	NASA	NASA Code CO and GSA. Interagency Agreement #DTFA01-01-X-02014.	$0	$0	$21,641	$22,073	$22,514	$21,050
Equipment	NASA	NASA Code CI SAIC - ODIN Contract #W-19720. Interagency Agreement #DTFA01-01-X-	$0	$0	$7,692	$11,019	$10,566	$9,052
Office Supplies	NASA	NASA Code CO and GSFC. Interagency Agreement #DTFA01-01-X-02014.	$0	$0	$1,500	$1,500	$1,500	$1,375
Copier	NASA	NASA Code CIP. Miscellaneous office photocopying. Interagency Agreement #DTFA01-01-X-02014.	$0	$0	$2,570	$1,582	$4,200	$4,200
Printing and Graphics	NASA	NASA Code CIP and GPO. Interagency Agreement #DTFA01-01-X-02014.	$0	$0	$64,000	$85,000	$60,000	$15,000
Miscellaneous	NASA	Unplanned activities and products.	$0	$0	$0	$0	$0	$0
Overhead @ 6% on FY 2001 amounts in Reimbursable Agreement #1	NASA	NASA. Interagency Agreement #DTFA01-01-X-02014	$0	$0	$6,984	$0	$0	$0
Web Site Maintenance, Subtask 10.63 - **OBLIGATED or PLANNED**	NASA	NASA Code CI. SAIC - ISEM Contract #W-19800. Interagency Agreement #DTFA01-00-X-02057.	$0	$342,699	$52,000	$196,000	$230,000	$82,544
Subtotal	NASA	As above.	**$0**	**$342,699**	**$174,386**	**$342,174**	**$354,780**	**$133,221**
Total FAA and NASA Actual or Planned Expenditures.	FAA & NASA	As above.	**$249,658**	**$599,929**	**$741,477**	**$899,199**	**$879,950**	**$148,221**
Amount Unused or for Reserve.	FAA & NASA	To Be Determined.	**$342**	**$71**	**$8,523**	**$801**	**$14,200**	**$451,779**

Appendix 3 – Educational Exhibit Matrix

Requested Date(s)	Type of Show	Location/Address
1/6-10/2003	Space Camp	Max Hasse Community Park, 3390 Golden Gate Blvd. W., Naples FL 34120
1/7-12/2003	Elementary School	Monte Sano Elementary School, 1107 Monte Sano Blvd., Huntsville, AL 35801
1/20-27/2003	2003 Nebraska Aviation Symposium	1952 Independence Court, Lincoln, NE 68521
2/3-7/2003	Aviation Lecture Series	Durango LaPlata County Airport, ATTN: Ron Dent, Director, 1000 Airport Road, Durango, CO 81301
2/5-10/2003	Government on Display Expo	Alan R. J. Linquist, MSP ATCT Staff Specialist, 6311 34th Avenue South, Minneapolis, MN 55450
2/17-23/2003		The Salina Journal, 333 South 4th Street, Salina, KS 67401
2/25-3/5/2003	Ardis Moody, 410 NW 16th Street, Lincoln, NE 68528	
3/1-9/03	Elementary School	Rahe Primary School, 1781 E. Ammann Road, Bulverde, TX 78163
3/7-13/2003	University of CA @ Berkeley, Aviation & the Environment Symposium	Radisson Berkeley Marina Hotel, 200 Marina Blvd., Berkeley, CA 94710 ATTN: Donna Reid "Doing the Wright Stuff," March 9-14.
3/13-15/2003	Idaho Aviation Festival and Safety Conference	Idaho Division of Aeronautics, 3483 Rickenbacker St., Boise, ID 83705
3/16-30/03	Fun with Flight Workshop	Golden State Museum, 1020 O Street, Sacramento, CA 95814 (Loading dock is on P Street between 11th and 10th)
3/15-24/2003	WIA International	Send to: Rich Manco, GRC, 21000 Brookpark Road, Cleveland, OH 44135
3/30-4/7/2003	NCASE	Cincinnati, OH
4/4-5/2003		1650 E. Perimeter Way, Tucson, AZ 85706
4/22-25/02	222 South Myers Street Burbank, California 91506-2654	
4/25-5/16/2003	Centennial program at College Park Aviation Museum	Curator of Collections, College Park Aviation Museum, 1985 Cpl. Frank Scott Drive, College Park, MD 20740
5/9-12/03		2506 Stone Ridge Drive, Poplar Bluff, MO 63901
5/19-23/2003	Mount Clemens Public Library	150 Cass Avenue, Mt. Clemens, MI 48043
5/20-31/2003	Air War College, Attn: Lt.Col. Martha Smyth, AWC/DF, 325 Chennault Circle, Maxwell AFB, AL 36112	
5/26-30/2003	Robins AFB Base Library	FL2060/Base Library, 620 Ninth Street, Suite 100, Bldg 905, Robins AFB, GA 31098-1469

5/1-14/2003	Fernbank Science Center	156 Heaton Park Drive, NE, Atlanta, GA 30307
6/1 to 7/15/2003	Space Camp	East Naples Community Park 3500 Thomasson Drive Naples, Fl 34112
6/6-10/2003	Air Force Air Show	Niagara Falls Air Reserve Station, Bldg. 600, NFIap-ARS, Niagara Falls, NY 14304, ATTN: Capt. Reed Mohilewsky or John Cooper
6/10-15/2003	100th Anniversary of Aviation	Mr. George Downie, Airport Director, Hot Springs Memorial Field Airport, 525 Airport Road, Hot Springs, AR 71913
6/12-17/03	Celebrating 100 Years of Aviation	Arnold Engineering Development Center
6/18-22/2003	Arnold Engineering Development Center	Mr. Richard Bearden, Arnold Engineering Development Center, 1476 Avenue E, Warehouse #1, Arnold AFB, TN 37389-8000, Attn: Murray King 931-454-6654
7/7-31/2003	Centennial Committee at MMAC	Kathy Wade, Federal Aviation Administration, CAMI Library, AAM 400A, 6500 S. MacArthur Blvd, Oklahoma City, OK 73169
8/7-29/2003	Oregon St. Capitol	Carolyn R. Bolton, Public Relations & Legislative Liaison, Oregon Dept. of Aviation, 3040 25th Street SE, Salem, OR 97302-1125
8/16-17/2003	Wings of Freedom Airshow	
8/3/03	Aviation Division San Diego International Airport Commuter Terminal, 3rd Floor 3225 North Harbor Drive San Diego, CA 92101-1022	
8/13-9/15/2003	Iowa State University	Iowa State University Library, Corner of Osborn Dr. & Morrill Road, Iowa State University, Ames, IA 50011-2140 Attn: Gerry McKierman
9/1/03-9/30/03	Children's Museum	Discovery Ctr Museum 711 North Main Street, Rockford, IL 61103
9/11-14/2003	Reno Air Races	4900 Energy Way, Reno, NV 89502
9/17-22/2003	Springfield Air Rendezvous	900 Capital Airport Drive, Suite 220, Springfield, IL 62707
10/6-10/03	Challenger Space Center	21170 N. 83rd Avenue, Peoria, AZ 85382
10/9-24/2003	SEED (Science Education Enrichment Day)	Ruth Patrick Science Education Center c/o John Hutches, Box 3, 471 University Parkway, Aiken, SC 29801
10/20-24/03		458AS/FLT CC Office, 433 Hangar Road, Room 200, Scott AFB, IL 62225
10/23-25/2003	Sierra Vista, AZ Municipal Airport Annual Fly In	City of Sierra Vista, Public Works Department, ATTN: Taylor, 401 Guilio Cesare Avenue, Sierra Vista, AZ 85635, Phone 520-458-5775
10/31-11/2/2003	U.S. Air Force Open House	1650 E. Perimeter Way, Tucson, AZ 85706-6052

11/6-15/2003	Idaho Aviation Hall of Fame & Idaho Aviation Museum	Idaho Aviation Museum, 3591 Rickenbacker, Boise, ID 83705
11/11-14/03	NC Science Teachers Association Conference	Joseph S. Koury Convention Center, Pinecroft Road Loading Dock area, 3121 High Point Road, Greensboro, NC 27407, ATTN: Katherine Pruzan, NC Science Teachers Assoc. Conf.
11/15-12/17/2003		Ontario City Library, 217 South Lemon Avenue, Ontario, CA 91716
12/13-18/2003	Kitty Hawk	

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